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The

Botanic Garden:

Consisting of

Highly finished Representations

OF HARDY

ORNAMENTAL FLOWERING

PLANTS,

CULTIVATED IN GREAT BRITAIN;

WITH

Their Classification, History, Culture,

AND

OTHER INTERESTING INFORMATION.

BY

B. MAUND, F.L.S.

Vol. I.

LONDON:

SIMPKIN AND MARSHALL, STATIONERS HALL COURT,

AND

SHERWOOD AND Cº. PATERNOSTER ROW.

Smith pinxt. et Watts flor. sculpt.

Fenner scripsit.

THE

BOTANIC GARDEN;

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ORNAMENTAL FLOWERING PLANTS,

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WITH

THEIR NAMES, CLASSES, ORDERS, HISTORY, QUALITIES, CULTURE,
AND PHYSIOLOGICAL OBSERVATIONS.

BY

B. MAUND, F. L. S.

VOL. VII.

"Not a tree,
A plant, a leaf, a blossom, but contains
A folio volume. We may read and read,
And read again, and still find something new,
Something to please and something to instruct."

HURDIS.

London;

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PREFACE.

It is with no ordinary feeling of satisfaction that, at the expiration of fourteen years, we meet as it were so wide a circle of friends—constant adherents to the object of our anxious labours. We cheerfully acknowledge a sense of the favour of their steady support, and gladly see their attachment to that science which cannot be pursued but with retrospective satisfaction, as well as present enjoyment.

The prospect before us of increased gratification is most encouraging; a rich harvest of splendid plants may be said to be at hand, to reward future exertions. Australia is disclosing her long hidden splendour, and America is daily pouring in her beauties. That so many of these are sufficiently hardy to bear the severity of our variable climate is a subject of sincere gratulation.

The increase, too, of Botanical and Horticultural Societies, and the stimulus thereby given to floricultural pursuits, is promising incalculable benefit to society. The artisan and the cottager are, by these, encouraged to meet in friendly competition, their more wealthy neighbours; and the door of communication thus opened, independently of the impulse given to a health-giving pleasurable pursuit, promises extensive moral advantages. We glance at these important changes as connected with our own labours, which it may not, we hope, be presumptuous to

affirm, have had some part in their advancement, since this little work was the first to spread a floricultural taste through various grades of society, and to give it popularity where the name of floriculture was almost unknown.

The progress of Natural Science is, indeed, leading us apace to more important views of the objects of Creation. "God saw every thing that he had made, and behold it was very good." But the capacity of man's intellect has not yet enabled him to discover the whole value of the work of His hand. The light is, however, dawning, and but few are quite negligent even of the weed on which they are privileged to tread. Some there are, it is true, that will ask, "where is the good?" considering not that our food, our medicine, and our clothing, are, directly or indirectly, dependent on the vegetable kingdom. That this is the case is, however, certain; and therefore the more we know of its productions the more efficiently shall we supply ourselves with these benefits. This consideration, however, is not the whole of our aim; for although these views regarding our bodily wants are unblameable, they are not, as Sir J. E. Smith has observed, "the sole end of human existence. Is it not desirable to call the soul from the feverish agitation of worldly pursuits to the contemplation of DIVINE Wisdom in the beautiful economy of Nature? Is it not a privilege to walk with God in the garden of creation, and hold converse with His Providence? If such elevated feelings do not lead to the study of Nature, it cannot far be pursued without rewarding the student by exciting them."

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Rubus fruticosus. 1/4

Lupinus nanus. 1/3

Sisyrinchium californicum.

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RU'BUS FRUTICO'SUS.

var. rubra pleno.

DOUBLE RED-FLOWERED BRAMBLE.

Class.
ICOSANDRIA.

Order.
POLYGYNIA.

Natural Order.
ROSACEÆ.

Native of	Height.	Flowers in	Habit.	Inhabits
Europe.	10 feet.	June to Sept.	Shrub.	Hedges.

No. 577.

Rubus, from a Celtic word, indicating red. Fruticosus, from the Latin frutex, a shrub.

This very showy plant is but a variety of the well-known British bramble; but whence it has been introduced to our gardens we are not informed. It is worthy of notice as a free-growing flowering shrub, and particularly as a fencing shrub, for who amongst us would not delight in seeing his hedges clothed with beautiful flowers, if their utility be thereby undiminished.

Layered, in the usual way, this plant will seldom make roots, to yield increase, but it may be readily propagated by covering with mould, in spring, a few inches of the points of the year-old shoots. Each point will produce one or more fine plants, which may be detached by midsummer. If, in Spring, the old shoots be cut out, and three or four of the young ones trained to poles, ten or twelve feet high, or round ornamental supports, they will emit a profusion of free-flowering lateral shoots, and prove worthy of a more distinguished title than bramble. This shrub will grow in any common soil, even if it be stiff and wet.

145 Don's Syst. Bot. v. 2, 534.

LUPI'NUS NA'NUS.

DWARF LUPINE.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of California.	Height. 8 inches.	Flowers in Aug. to Sept.	Duration. Annual.	Introduced in 1833.

No. 578.

For the derivation of the word Lupinus, see No. 310. Nanus, from the Latin, signifies a dwarf.

This is one amongst the most desirable of the numerous species of Lupine for which so large a debt of gratitude is owing to the late lamented Douglas, and his patrons, the London Horticultural Society. The mingled tints of its flowers, which have a very pleasing effect, may be observed to be subject to variation from the soil in which the plants are grown. Ours grew in a border, containing a considerable portion of peat, which has given to them a much more general tint of blue than occurs in those grown in red loamy soil. The change of colour in the blossoms of Hydrangea, which we noticed in the Auctarium, (section 126) will be found not to be peculiar to that plant, although we know of none other which so prominently displays the influence of peat.

The Lupinus nanus produces abundance of seed, which if sown in autumn will flower in May and June. Spring-sown plants blossom in August and September; and if sown in May, a still later bloom will be obtained.

Bot. Reg. 1795.

SISYRIN'CHIUM CALIFOR'NICUM.

CALIFORNIAN SISYRINCHIUM.

Class.
TRIANDRIA.

Order.
MONOGYNIA.

Natural Order.
IRIDACEÆ.

Native of California.	Height. 1 foot.	Flowers in June, Sept.	Duration. Perennial.	Introduced in 1796.

No. 579.

The name Sisyrinchium, is derived from the Greek SYS, a pig; and RHYGKOS, a snout. The original Sisyrinchium is noticed by Sir James Smith, in Rees's Cyclopædia, as "The name of a bulb, mentioned by Pliny, amongst other bulbs, under various Greek denominations. He relates, after Theophrastus, that it is remarkable for increasing, during winter, in the lower part, which in spring becomes contracted, and the upper part is then eatable. Nobody has ascertained the real SISYRINCHIUM of Theophrastus. Botanists have applied this appellation, according to their fancy, without even pretending to ascertain whether it alludes to the fondness of swine for the root, or to any resemblance in its figure to their snout." To whatever flower former botanists applied this name it is evident that ours has very little affinity with the original.

It is not a showy but a neat and unobtrusive plant, which, through several months of summer, will generally be found ready to offer its admirers a flower, or promise them one to-morrow. It may be increased by division of its roots, and will flourish in any garden soil.

Hort. Kew. 2, v. 4, 135.

CY'CLAMEN VER'NUM.

SPRING CYCLAMEN.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
PRIMULACEÆ.

Native of Europe.	Height. 3 inches.	Flowers in March.	Duration. Perennial.	Introduced in 1814.

No. 580.

The roundness of the tuberous root, or the circular coiling of the peduncles of Cyclamen is doubtless alluded to in the name, which is derived from the Greek KUKLOS, a circle. It has borne the name of Sowbread, an appellation which may be accounted for by the fact mentioned in Lindley's Natural System of Botany, "That the root of Cyclamen is famous for its acridity, yet it is the principal food of the wild boars of Sicily."

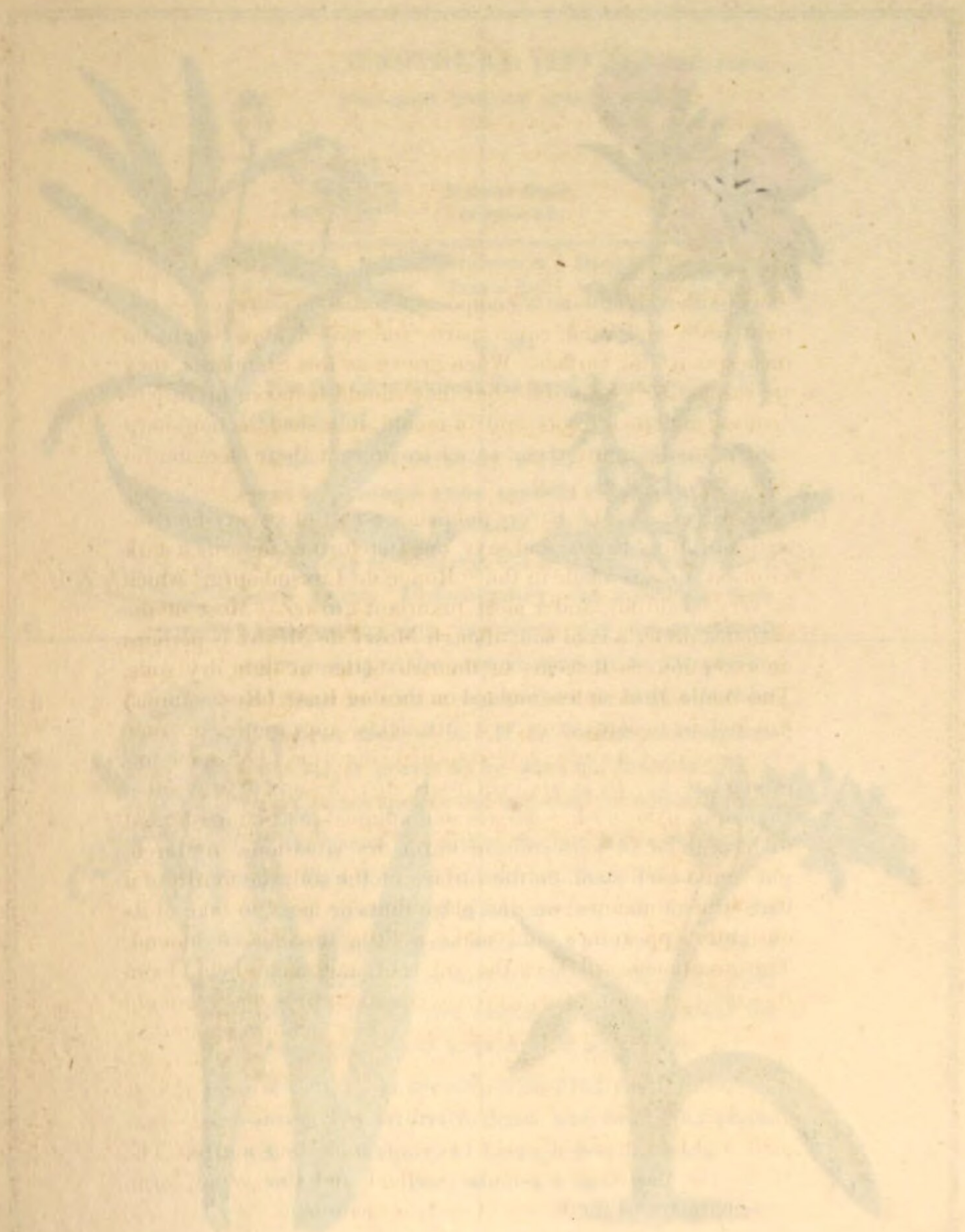
All the species of Cyclamen rank amongst the most delightful ornaments of the garden; they possess a beauty, a neatness, and oftentimes a fragrance, which delight every one who has cultivated them. It is difficult to account for their rarity, but so it is, that not one respectable garden in twenty possesses a collection of them. This is still the more singular, when it is considered that they may be rapidly increased from seeds; and also that some one or other of the species may always be found in flower, indeed, the same species may be so managed as to greatly vary its season of gaiety. That we may give assistance to the more general culture of the several species of this charming genus, we shall, in the first

place, enumerate them; this will aid some of our friends in their endeavours to form a collection; and hereafter we shall have opportunities of giving such directions as will insure successful management.

The species of this very distinct little group of plants are but few, viz. Cyclamen coum, figured under No. 229 of the Botanic Garden: Cyclamen vernum, now under notice: Cyclamen Europæum, sometimes called Clusii: Cyclamen hederæfolium; of which species there is a red, and also a white, variety: and Cyclamen repandum. Four other hardy species are known, but they are not frequently met with in the nurseries; viz. neapolitanum, latifolium, linearifolium, and Ibericum. The greenhouse species, Persicum, occurs with both variegated and white flowers, and is as easily managed as either of those previously mentioned. A more delightful plant in spring, when covered with its abundance of flowers cannot easily be conceived; and a more fragrant one than occurs in some of its varieties need not be desired.

The tubers of Cyclamen, although they are mere reservoirs of nutriment, are unlike those of many other plants—they are not exhausted by the production of flowers and fruit, and renewed annually as the solid bulbs of Crocus, but continue to increase for several years. Their increase depends much on the proper care bestowed on the plants whilst in flower, and immediately afterwards, this being the season when the leaves elaborate the sap into a nutritive juice, preparatory to its descent and deposition in the tuber. We shall, ere long, continue our notice of this interesting genus.

Loudon's Ency. of Pl. 128.



Œnothera viminea. ½

Platystemon Californicus. ½

Scilla præcox. ½

Iris Swertii. ½

ŒNOTHE'RA VIMI'NEA. Var. dentata.

TOOTHED TWIGGY ŒNOTHERA.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
ONAGRACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N.America	1 foot.	June to Sept.	Annual.	in 1834?

No. 581.

For the derivation of the word Œnothera see No. 163 and 201.

This is a remarkably pretty Œnothera, which came up amongst some annuals raised from seeds received from the continent. It has been considered a variety of Viminea, but of its being so we have much doubt. Unfortunately, the specimen from which our drawing was taken was not preserved, consequently at the present moment we are precluded from so nice a comparison as may otherwise have been made of it. If on further examination hereafter, it proves as we have no doubt it will, to be a distinct species the fact shall be noticed.

This genus has within the last fifteen years been more than doubled in number, there being now in culture upwards of sixty species. A few of the perennial species are somewhat tender, but with a little attention they may be raised sufficiently early to flower in the first season, and thus present the advantages of both annuals and perennials.

Seeds of our present interesting species may be sown in the borders in April, and the young plants will merely require to be kept free of weeds.

Don's Syst. Bot. 2, 688.

PLATYSTE'MON CALIFOR'NICUS.

CALIFORNIAN PLATYSTEMON.

Class.
POLYANDRIA.

Order.
POLYGYNIA.

Natural Order.
PAPAVERACEÆ.

Native of California.	Height. 1 foot.	Flowers in August.	Duration. Annual.	Introduced in 1833.

No. 582.

The name Platystemon is derived from the Greek PLATUS, broad, and STEMON, a stamen. This genus was named Boothia by Douglas, and transmitted by him under this name to the London Horticultural Society, but changed by Mr. Bentham, on account of its similarity to Boottia, a generic appellation already established. From Mr. Bentham's report to the Horticultural Society, it appears that the Platystemon Californicus has not yet been sufficiently cultivated in Great Britain to assume the same handsome free-flowering character which distinguishes the dried specimens received from its native country, for he observes in his Report to the Horticultural Society, that this little annual flowered very sparingly, but the fine specimens transmitted by Mr. Douglas in a dry state promise that it may become as interesting to horticulturists from its beauty, as it is to the botanist from forming the connecting link between the Ranunculaceæ and Papaveraceæ.

This was one amongst about 60 species of plants which were raised from seeds transmitted by Mr. Douglas from California, when out a second time for

the London Horticultural Society as their Botanical Collector, in October, 1829. Mr. Bentham states that Douglas landed in the spring of 1830, at the mouth of the Columbia river, where he met with many difficulties and disappointments as to the journeys he had intended to make to those parts of the interior which promised the best to reward his exertions. The natural obstacles opposed by the wild state of the country, were, in many cases, rendered invincible by the dangerous character of the natives; and the whole season of 1830 was consumed in short excursions in the neighbourhood of the Hudson's Bay Company's Fort.

In the winter 1830-1, an opportunity occurred of communicating with the northern part of Spanish California, of which Mr. Douglas availed himself, and landed early in 1831 at Sans Francisco, from whence he proceeded to the Spanish settlement of Monterey. At this place he was well received by the monks, and every facility was afforded him for exploring the country in the neighbourhood. He remained there till the month of August, 1832, when he left for the Sandwich Islands. Thence he despatched to this country his Californian herbarium and seeds. Amongst which was our present subject.

Our drawing was derived from a plant which flowered in the borders of the Birmingham Botanic Garden. It appears to require no peculiar care, but may be sown as other hardy annuals. It is not improbable, from its present appearance but it may produce the finest plants when sown in autumn, this, however, must be determined by further experience of its powers to bear our climate.

SCIL'LA PRÆ'COX.

EARLY-FLOWERED SQUILL.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
LILIACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
Uncertain.	4 inches.	Mar. April.	Bulbous.	in 1790.

No. 583.

The Greek word SKYLLO, to injure, is supposed to be the root of our present generic name. It is certain that the term was applied by the Greeks to an acrid bulb, and is so, we believe, at the present day. The description given by ancient authors of their SKYLLA is too imperfect to admit of its being identified; there are, however, strong reasons for supposing that the Scilla maritima, or officinal squill, was the plant alluded to. The Latin word, præcox, signifies soon, or early.

Although this species of Scilla has, so long ago as 1790, been introduced to England, it may be esteemed as comparatively rare; nor has any figure of it been hitherto published. It is one of those early attractions which we always meet with resuscitated pleasure. When the garden in the rising year begins to array itself in gold and purple—in youthful brilliancy, all nature joins in the scene of gladness. 'Twere ungrateful then for man to stand alone in sullen apathy.

It will grow in any common soil, and its bulbs increase rather freely. It is a plant well suited also to pot culture.

Loudon's Ency. of Pl. 278.

I'RIS SWER'TII

SWERT'S IRIS.

Class.
TRIANDRIA.

Order.
MONOGYNIA.

Natural Order.
IRIDACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
S. Europe?	1½ feet.	April, May.	Perennial.	in 1819?

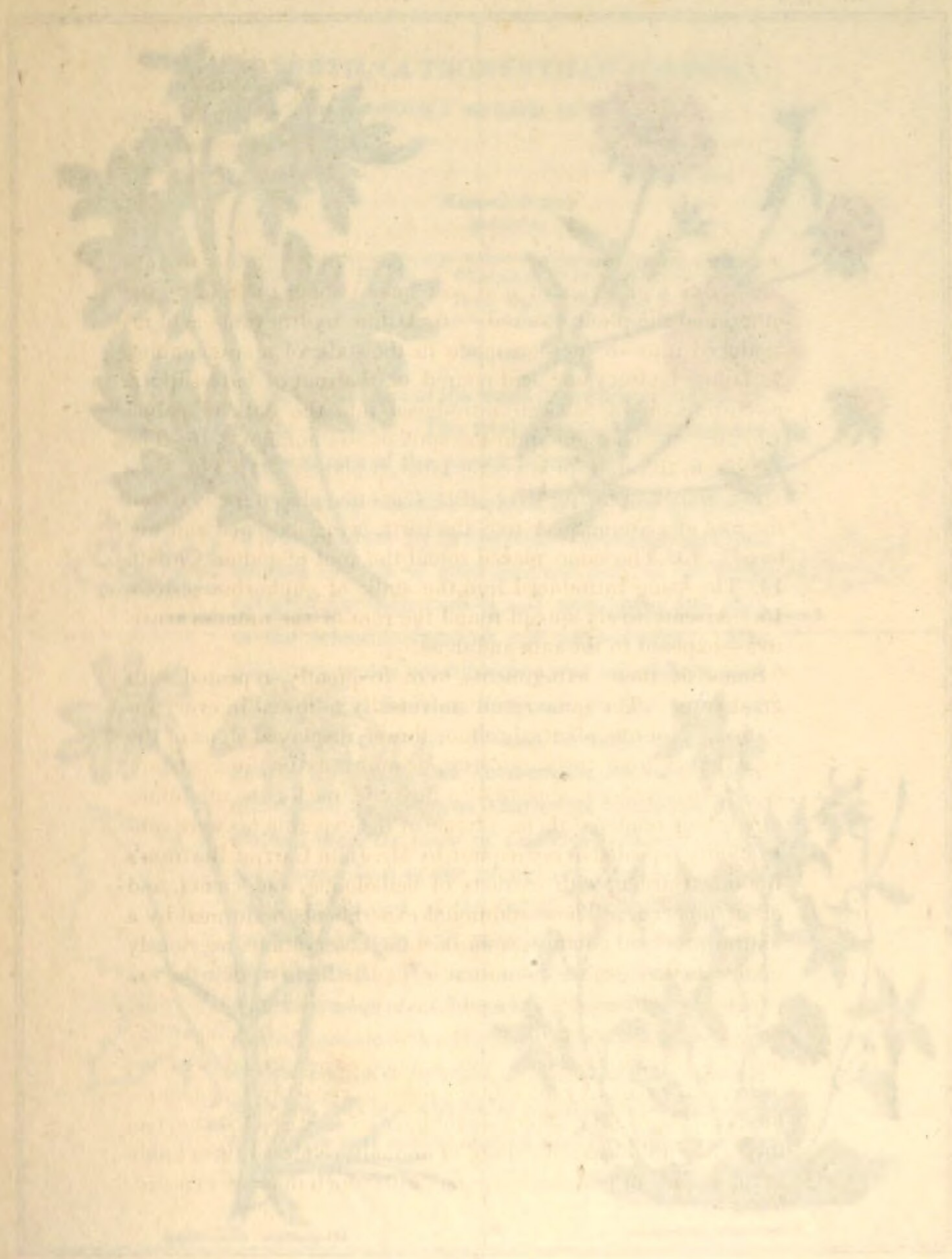
No. 584.

The name Iris, the rainbow, in many instances is well applied to this very beautiful genus of plants. Emanuel Swert, (or Sweert) after whom this species has been named, was gardener to the emperor Rodolphus, II. He published a work at Frankfort, in 1612, called Florilegium, with numerous plates of ornamental plants. The object of this work was somewhat similar to that of our countryman, Parkinson, in his Paradisus Terestris.

This is a lovely species of Iris; it possesses a delicacy and blending of tints, not surpassed by any. Of the origin of this particular variety there is some uncertainty, and it is not a plant that is generally known.

The culture of Irises has of late years been but little attended to. We are of opinion, however, that several species may be greatly improved in growth by attention; and we shall present our readers with an idea from Gilbert, who, in allusion to some of the tuberous kinds, says "their roots sometimes lose their fibres, and then the green leaves die to the ground; such as do must be taken up and kept out of the ground till October."

Loudon's Ency. of Pl. 44.



Potentilla tormentillo-formosa. ⅓

Nemophila phacelioides. ⅓

Campanula garganica. ⅓

Eriophyllum cæspitosum. ⅓

POTENTIL'LA TROMENTILLO-FORMO'SA.

MR. TONGUE'S HYBRID POTENTILLA.

Class.
ICOSANDRIA.

Order.
POLYGYNIA.

Natural Order.
ROSACEÆ.

Hybrid origin.	Height. 6 inches.	Flowers in June, Sept.	Duration Perennial.	Originated in 1834.

No. 585.

The derivation of the name Potentilla is explained under No. 157. The trivial name is compounded of the names of the parent plants.

The many beautiful hybrid plants now produced in our gardens by industrious cultivators are becoming objects of attention, not only to the floriculturist for their variety and attractions, but also to the scientific botanist and physiologist. The plant now under consideration was raised from seed of Potentilla formosa, fertilized by the pollen of Tormentilla reptans. It must be confessed that the genera Potentilla and Tormentilla, are very closely allied, still they possess characters which are more distinct than are those of numerous others. Here then, according as our genera are at present established, is an end of the belief that species of the same genus only will mingle their characters, by hybridisation. We may refer to another well attested instance of seedlings being raised between two distinct genera—the Digitalis and Gloxinia, stated under Digitalis hybrida, No. 468 of the Botanic Garden. It is much to be regretted that botanists of leisure and ability should not, ere this, have in-

stituted experiments on hybridising, for the purpose of developing the laws of vegetable reproduction, a better knowledge of which may, in the first place, discover to us the organic differences in plants which constitute a barrier to hybridisation; and, secondly, may enable us to anticipate the probable value of the offspring of any two distinct species which may reasonably be expected to mingle their characters. We say laws of reproduction, for doubtless these are immutable; and an investigation of them is the privilege of rational beings. To say that these changes of character in plants, are the result of chance, is, as Dr. Rogett observes, equivalent to the assertion that they are wholly without a cause. In lieu of such rational enquiry, we sometimes find a prejudice raised against the endeavor to effect that which is more or less continually brought about by nature uninfluenced by human agency; and it would seem that when nature cannot conveniently be circumscribed by the systems of man's invention, a desire arises to restrict the prolific operations of that all-bountiful providence, the incomprehensible variety of which ought but to excite unbounded admiration.

The Potentilla tormentillo-formosa was raised by R. Tongue, Esq. of Forton Cottage, Lancaster; and its prostrate growth much resembles that of Tormentilla reptans, but it does not emit roots at the stem joints. The Messrs. Pope of Handsworth, who favoured us with the plant for drawing, say that with them, it seems to be an almost perpetual bloomer. It bears some resemblance to our own hybrid Potentilla, No. 385, but has smaller and less brilliantly coloured flowers.

NEMO'PHILA PHACELOI'DES.

PHACELIA-LIKE NEMOPHILA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
HYDROPHYLLACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N.America	1 foot.	July, Aug.	Annual.	in 1822.

No. 586.

The name Nemophila is compounded of two Greek words, NEMOS, a grove; and PHILEO, to love; indicating that the plant luxuriates in shady places. This name was adopted by Nuttall, from the fact, we believe, that he found it only in the shady woods of Arkansa.

Although this plant has been considered biennial, it is literally annual. If its seeds be kept till spring they do not readily vegetate; but if sown in autumn, or suffered to fall from the plant, they grow quickly. The young seedlings will then bear our most rigid winters, and may be transplanted in the spring if necessary. It will flourish in any soil, whether peat, loam, or that which is light and sandy, but most luxuriantly in that which is strong and damp. Its stems are succulent and tender, therefore should be pegged down to prevent their being broken by winds. A shady situation should be chosen and one that is sheltered, to prevent its being blown about.

It will continue in flower several months, and may advantageously fill a situation unfavourable to many other plants.

Loudon's Ency. of Pl. 140.

CAMPAN'ULA GARGAN'ICA.

THE HAREBELL OF ST. ANGELO.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
CAMPANULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S. Italy.	5 inches.	July, Aug.	Perennial.	in 1833.

No. 587.

The derivation of the generic name is stated under No. 130. Garganica was given by Professor Tenore as a specific name, from Mount Gargano, in Naples, where he discovered it, near to fort Angelo.

Professor Don says that this beautiful Campanula was raised in the Bishop of Rochester's Garden, at Bromley, from seeds sent to Miss Murray from Naples, by the Hon. W. T. H. Fox Strangways. Dr. Lindley mentions it as having been raised also in Mrs. Marryat's Garden from seeds presented to Mrs. Palliser, by Professor Tenore. Some variation seems to occur in the plants thus obtained, both in respect to their leaves, and in the colour and depth of the lobes of the corolla. Their habit of growth also varies; those raised at Mrs. Marryatt's being more diffuse and spreading than the plant whence our drawing was taken.

It is a most desirable species of Campanula, particularly for rockwork, if it prove quite hardy. It may be divided at the root, or increased by cuttings. Kept in pots of peat and loam, over plenty of drainers, it will flower abundantly; or it may be turned into the borders, in spring.

Don's Syst. Bot. 3, 761.

ERIOPHYL'LUM CÆSPITO'SUM.

TURFY ERIOPHYLLUM.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America	1 foot.	July, Nov.	Perennial.	in 1826.

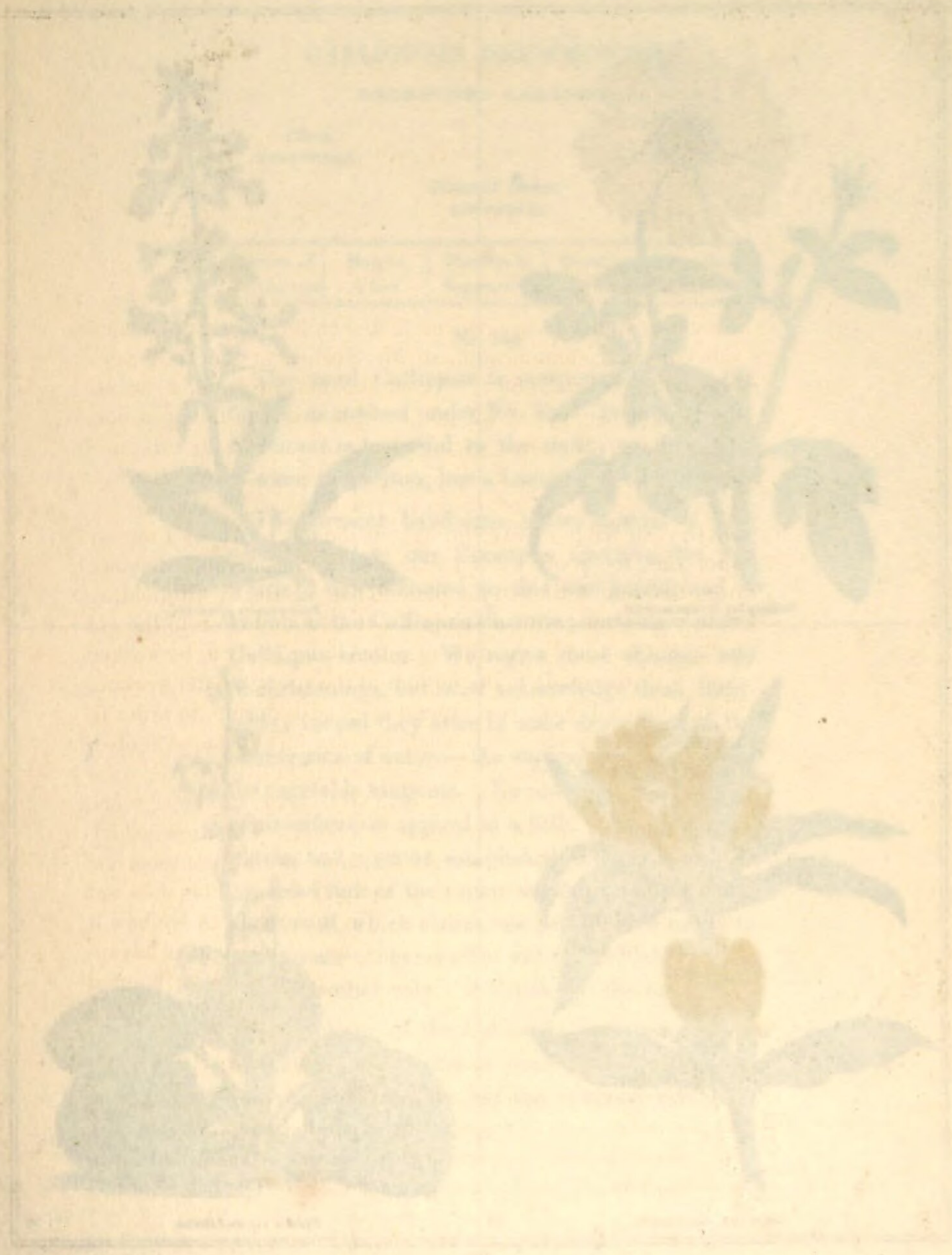
No. 588.

Eriophyllum is deduced from the Greek ERION, wool; and PHYLLON a leaf. The grey woolly foliage of this plant amply justifies the application of the name. The specific name, arising out of the Latin cæspes, a turf, is indicative of the compact growth of this plant—its foliage spreading around and forming an even little mound, close and turf-like.

This, like many other beautiful plants which we have had the pleasure of publishing, was sent from North America to the London Horticultural Society by their collector Douglas. It is remarkably showy, and assumes a character in its growth, of which the drawing of a few flowers only can convey no idea. When well grown it will spread over a circular space of three or four feet diameter, and is usually covered with a profusion of flowers for nearly two months. Subjects, even of minor importance, sometimes present themselves for delineation, to which no ability of the artist can do credit.

This plant may be divided in spring or autumn, and will luxuriate in any good garden soil. It is most showy when left undisturbed for three or four years.

Bot. Reg. 1167.



Calliopsis Drummondii. ½

Pentstemon gracilis. ½

Gentiana saponaria. ½

Pyrola rotundifolia. ½

CALLIOP'SIS DRUMMON'DII.

DRUMMOND'S CALLIOPSIS.

Class.
SYNGENESIA.

Order.
FRUSTRANEA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N.America	2 feet.	September.	Annual.	in 1835.

No. 589.

The word Calliopsis is compounded from the Greek, as noticed under No. 538. It implies that the flower is beautiful to the sight; or, according to some authorities, has a beautiful eye.

The present handsome showy annual is very nearly allied to our Coreopsis tinctoria, No. 13; which is now included in this new genus, and is known as the Calliopsis tinctoria; sometimes called Calliopsis bicolor. We regret these changes and re-christenings, but must acknowledge them inevitable; indeed they arise in some degree out of the exuberance of nature—the superabundant riches of the vegetable kingdom. No sooner are our systems of classification applied to a little group of exotic plants, and a genus established, than another unexpected link of the vegetable chain of creation is discovered, which claims one part of such genus as its intimate congeners, but will rank with the others as half brother only. A division is the result.

The foliage of the Calliopsis Drummondii prominently distinguishes it from other species. In cultivation it requires but the common care of a hardy annual.

PENTSTE'MON GRA'CILIS.

SLENDER PENTSTEMON.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
SCROPHULARIACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America	1 foot.	July, Sept.	Perennial.	in 1824.

No. 590.

It will be recollected that some of our present species of Pentstemon were considered as belonging to the genus Chelone. A separation of them was adopted on account of their possessing an imperfect fifth stamen, and on this distinction from Chelone the genus Pentstemon is founded. The name, from the Greek PENTE, five; STEMA, a stamen, points out the circumstance.

This most attractive American genus has, within the last ten years, given to our gardens an abundant supply of additional beauties, several of which are not yet generally known. We intend ere long introducing them to our readers, feeling assured they will be received with pleasure.

The Pentstemon gracilis is a small species, but very hardy; and when grown in considerable patches becomes a desirable ornament. Being of low and unobtrusive habit it should be planted near to the front of the border; and to obtain a luxuriant growth, it will be desirable that it be taken up every second spring and replanted. A rich loam with the addition of a little peat will prove a very suitable soil for it.

GENTIA'NA SAPONA'RIA.

SOAPWORT-LEAVED GENTIAN.

Class.
PENTANDRIA.

Order.
DIGYNIA.

Natural Order.
GENTIANACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America	2 feet.	Aug. Sept.	Perennial.	in 1776.

No. 591.

The origin of the name Gentiana has been previously given under No. 51.

There are very few plants of the same stature, when grown in sufficient masses, and under successful culture, which produce a more splendid effect than the Gentians.

The dazzling blue of Gentiana acaulis (No. 51) is never excelled. Some persons have experienced disappointment in the cultivation of the species of this genus, which, generally speaking, has arisen from their plants having had too much nursing, and in being denied shade and quietude. A few species will not bear the least drought; even the Gentianella it will not unfrequently destroy. Gentiana verna, which is esteemed a very fastidious plant, we have seen propagate itself spontaneously, when left undisturbed in a shady situation amongst moss and lichens. As it is the first object of the medical man to ascertain the disease of his patient, so should it be of the gardener to ascertain the habit of the plant he undertakes to cultivate.

The medicinal virtues of some species of Gentian, especially the Gentiana lutea, have long been held

in high estimation, and by many practitioners are regarded with considerable attention at the present day. The root is the part of the plant usually employed, which is used in the form of tincture, infusion, and extract, and found to be an excellent tonic and stomachic. Modern chemistry has greatly increased the utility of vegetable remedies, not only by analysis, determining the exact proportions of their component parts, but also by concentrating their active principles, and thereby producing a medicine in its most simple and energetic state. The concentrated preparation of Gentian is called Gentianin, and promises to be a powerful medicine. We are chiefly indebted to the chemists of France for thus having discovered that the active principle of vegetables is contained in a peculiar alkali, and also for the method of its separation, so as to render it available to the purposes of the medical practitioner. The utility of such preparations is abundantly exemplified by Quinine, the concentrated active portion of Peruvian Bark, the use of which is now so generally adopted in preference to the Bark itself, or its pharmaceutical preparations.

Gentiana saponaria will flourish in loamy soil, in almost any situation; it is in the culture of the smaller alpine species where difficulty sometimes arises. These, like alpines in general, should not be exposed to the sun's rays in the height of summer. As well as by division, plants may be propagated from seeds, which should be sown in autumn, in pots, containing a mixture of peat and loam, and have the protection of the cold frame during winter.

PYRO'LA ROTUNDIFO'LIA.

ROUND-LEAVED WINTERGREEN.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
ERICACEÆ.

Native of Britain.	Height. 4 inches.	Flowers in June, July.	Duration Perennial.	Inhabits Woods.

No. 592.

The meaning of the word Pyrola is noticed under No. 575.

Pyrola rotundifolia is one of the rare plants of our own island. It is mentioned as occurring in Suffolk and Yorkshire, and also in the Highlands of Scotland; but very few botanists have had the gratification of collecting it in its native habitat. It has long been known as a British plant, and is noticed by Lyte and Gerard; and the latter observes that "It is a most singular wound herb, either given inwardly, or applied outwardly; the leaves whereof stamped and strained, and the juice made into an unguent, or healing salve, with wax, oil, and turpentine, doth cure wounds, ulcers, and fistulas, that are mundified from the callous and rough matter, which keepeth the same from healing." The style of the Pyrola rotundifolia is curved remarkably to suit its requirements. Although a small object it may become our monitor.

This is the finest of all the Pyrolas, and is very suitable for planting in a shady peat border; or for pot culture with alpines, where it will flourish abundantly. It may be divided in spring.

Don's Syst. Bot. 3, 863.

Leptosiphon androsaceus. ½

Genista radiata. ½

Calceolaria Fothergilli-thyrsiflora. ½

Funkia ovata. ½

LEPTOSI'PHON ANDROSA'CEUS.

ANDROSACE-LIKE LEPTOSIPHON.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
POLEMONIACEÆ.

Native of California.	Height. 8 inches.	Flowers in July.	Duration. Annual.	Introduced in 1833.

No. 593.

The name of the genus now before us is derived from the Greek words, LEPTOS, slender; and SIPHON, a tube. Its application is evident.

This is a very pretty newly-introduced annual, of humble growth, varying in the colour of its flowers, from white to pale pink or purple. It is a valuable little plant for flowering early in the summer from autumn-sown seeds. The past winter has been severe, and most unfavourable to tender plants, notwithstanding which we have healthy seedlings of it, growing in an exposed situation, from seeds which had been shed from a flowering plant last autumn. This may be considered as ample proof of its power to withstand any vicissitudes of winter; but the heat of summer, in a dry soil, is not very congenial to its luxuriance, therefore a rather shady situation should be chosen for spring-sown plants, which are intended to flower in August.

The physiologist may be recommended to examine the leaves of this plant, which are deeply divided into segments, always consisting of an even number, as four, six, eight, &c.

GENIS'TA RADIA'TA.

RAYED GENISTA.

Class.
MONODELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Italy.	$1\frac{1}{2}$ feet.	June, July.	Perennial.	in 1758.

No. 594.

The Latin genu, the knee; and also the Celtic gen, a small bush, have been referred to as the parents of the word Genista; its legitimate lineage is, however, enveloped in much obscurity. The Latin term radiata, rayed, alludes to its trifoliate leaves, which project horizontally and assume a ray-like appearance.

Although this shrub is an old inhabitant of our gardens, it is by no means common, but deserves to have a place in every respectable collection of such plants. Its neat growth and dwarf size adapt it to the front of the shrubbery; but it cannot be recommended as harmonizing with the gaieties of a flower border, unless it be where other shrubs are intermixed to form a back ground to the intended picture.

The Genista radiata occupies the same situation on the Italian mountains as our common broom (Cytisus scoparius) does with us. As the young slender shoots sometimes suffer in exposed situations from severe frosts, a sheltered one should be chosen. It may be increased by layers, or seeds. Soil is unimportant.

Don's Syst. Bot. 2, 149.

CALCEOLARIA FOTHERGILLI-THYRSIFLORA.

LEOPARD-SPOTTED SLIPPERWORT.

Class.
DIANDRIA.

Order.
MONOGYNIA.

Natural Order.
SCROPHULARIACEÆ.

Hybrid origin.	Height. 1 foot.	Flowers in June, July.	Duration. Perennial.	Raised in 1834.

No. 595.

The general shape of the flowers of this genus being somewhat like that of a shoe gave rise to its name, from the Latin word calceolus. In accordance with the rule we have adopted for distinguishing hybrids, (see the article Potentilla atrosanguinea-pedata, No. 385) the present plant has a specific name compounded from those of its parents. The advantage of the rule is obvious.

This beautiful variety of Calceolaria was raised by Mr. Thomas Williams, gardener to John Willmore, Esq. of Oldford, near Birmingham, from seeds of Calceolaria Fothergilli, the flowers of which had been fertilized by pollen of Calceolaria thyrsiflora. The neat upright growth of this plant, its hardy character, and its abundance of beautifully spotted flowers, recommend it to particular notice; and we have the greater pleasure in making this announcement, inasmuch as it will soon be met with in most of the principal nurseries, having been very liberally distributed amongst flower cultivators in various parts of the kingdom, under Mr. Williams's name of Calceolaria pardanthera. There are very few persons, perhaps not one, who have propagated

hybrid Calceolarias with the success which has attended Mr. Williams; we are therefore gratified in the opportunity of laying before our friends a description of his practice. He recommends that florists who wish to originate beautiful varieties of Calceolaria should take the species Fothergilli as the one to yield them seed; whose flowers should be fertilized by pollen of the most approved shrubby species. Seed is thus easily obtained, but very many persons fail in their endeavour to make it vegetate. Mr. Williams, in the true spirit of liberality, desirous that all may benefit by his experience and indefatigable industry, enables us to give the following directions. The seeds should be sown in March, in shallow pans of peat, the peat being sifted and made very fine on the top, but left in a coarser state underneath. The surface should be gently pressed to make it quite smooth, the seeds sown thereon, and as much fine sand sprinkled over it as will barely cover the seeds, or just enough to keep them in place. A careful watering should then be given with a fine syringe, and the pans placed in a cold frame. Here occasional watering will be requisite, and shade from the sun in warm weather. With this treatment every good seed will vegetate; but if they are submitted to heat, the greater portion will perish. "By this method," says Mr. Williams, "from my first sowing of Calceolaria seed in 1835, I had twenty thousand good plants, and nearly as many from the second." We can bear testimony to the most splendid varieties having originated at Oldford; many which at first sight would not be recognized as belonging to any known species.

FUNKIA OVA'TA.

OVATE-LEAVED FUNKIA.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
LILIACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Japan.	1½ feet.	May, July.	Perennial.	in 1776.

No. 596.

Funkia is a name adopted by Sprengel, after the German botanist, Henry Funk. This plant was long known as the Hemerocallis cerulea, but was divided, with the species Japonica, from that genus by Sprengel, who, somewhat unnecessarily, likewise changed their specific names.

The Funkia ovata is not admired for its flowers alone, but also for its foliage, which is handsome and not inconveniently spreading. When first introduced it was cultivated as a tender plant, for we find mention in Curtis's Botanical Magazine, that it was thought to bloom best in the stove, but that it would thrive very well in the greenhouse. By this we learn that it may be forced with success, as an indoor ornament, if it be desired. This species never fails to flower in the borders; but the Funkia Japonica, a similar plant with white flowers, rarely blossoms in the open ground, wanting, it is probable, the stimulus of the greenhouse, a situation of which it is quite worthy.

The Funkia ovata, although native of a warm climate, grows freely in our common soil; and may be divided for increase in spring or autumn.

Loudon's Ency. of Pl. 260.

Ribes glutinosum. 2/3

Thalictrum tuberosum.

Statice latifolia. 1/3

Helenium undulatum. 1/2

RI'BES GLUTINO'SUM.

GLUTINOUS CURRANT.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
GROSSULACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
N.America.	6 feet.	April, May.	Shrub.	in 1832.

No. 597.

Ribes, for the derivation see No. 377.

This newly introduced species of Ribes, it was anticipated from dried specimens received by the London Horticultural Society, would exceed in beauty all that had preceded it. The bunches of its flowers were remarkably large—much more so than those of sanguineum had usually been seen, each having from thirty to forty flowers. Its growth in this country has not, however, yet realized these expectations. It is a most desirable shrub, but still, as far as it has at present shown itself, is not fully equal to sanguineum. Should it prove hereafter, when grown under auspicious circumstances, to exhibit that superiority of character which it seems to possess in its native country, we may congratulate our friends on the accession of such a plant to their collections.

We may remark, in regard to the genus Ribes, that it well exhibits the rapid progress lately made in the delightful pursuit which now engages so much attention in the world of intellect. We shall not be refused the use of this expression. No pursuit, surely, is more intellectual—none less sensual, than

the studies and enjoyments connected with a flower garden. At present Great Britain possesses about fifty species of Ribes. Of these we may reckon eight to be native, and eight others to have been introduced to this country previous to the year 1810. The remaining thirty-four species have been introduced since that period. When it is considered how short a time has elapsed since attention has been prominently called to the vegetable riches of other countries, and the almost unbounded extent of regions yet wholly unexplored, every one must anticipate, with amazement, the incalculable variety of splendid plants which may hereafter ornament our gardens. The public spirit which now prevails in Europe is effecting much by the maintenance of botanical collectors abroad, still it will be readily imagined how little so few persons can effect in the extensive wilds of Africa and America. A collector to discover the chief beauties of any particular district, should visit all its principal hills and valleys, woods and plains, not less than six times in the year. To do so in the least degree satisfactorily, and prepare a partial herbarium of the district, a space of country thirty miles square would, on the average, including barren parts and water, prove an ample portion, even for a cursory examination. Now as America alone contains about fifteen millions of square miles, it will be found that it would occupy upwards of eight hundred botanists twenty years to collect the principal riches of this country.

The Ribes glutinosum may be propagated easily from cuttings, taken either in June or autumn.

THALIC'TRUM TUBERO'SUM.

TUBEROUS-ROOTED MEADOW RUE.

Class.
POLYANDRIA.

Order.
POLYGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Spain.	2 feet.	June.	Perennial.	in 1713.

No. 598.

Thalictrum is a name adopted by modern botanists from the Greek THALIKTRON of Dioscorides; and it is thought most probable that some of the present genus bore this name amongst the ancients; but the descriptions of old authors, as we have previously observed, are too vague to assist much in distinguishing their plants.

One of the species of this genus is well known—the Thalictrum aquilegifolium, and usually called the feathered Columbine; but the Thalictrum tuberosum, which is the handsomest plant amongst them, is not frequently met with, excepting in good collections. It is not remarkably showy, but its upright growth, neat foliage, and delicately tinted flowers, are qualities which sufficiently recommend it as a border plant to mix with others of more diffuse habit, and specious character.

Some species increase rapidly—more so than is always desirable, but such is not the case with the Thalictrum tuberosum. Its tuberous roots may be divided, if required, either in the spring or autumn; and they should be planted in a light soil, in a rather dry situation.

Don's Syst. Bot. 2, 11.

STA'TICE LATIFO'LIA.

BROAD-LEAVED SEA LAVENDER.

Class.
PENTANDRIA.

Order.
POLYGYNIA.

Natural Order.
PLUMBAGINACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Siberia.	1 foot.	May, July.	Perennial.	in 1788.

No. 599.

The generic name, Statice, is supposed to have been derived from the Greek STATIZO, to stop, on account of the astringent quality of the plant to which the name was originally given.

This genus, as established by Linneus, included the various species of Thrift, so well known in our gardens, but these have been separated by Willdenow, and form a new one under the name Armeria.

An individual flower of the Statice latifolia is a very unimportant production, if considered merely with respect to its property of producing gaiety in the parterre. It is on the multitude of these little gems, arranged as we find them in panicles, so distributed and spread, perhaps two feet wide, that their attraction depends. They produce one entire bush of softest azure tint, without an intruding leaf to break its harmony. The plant may be said to stand up a phantom in a grosser community. It increases but slowly, and becomes much the more handsome by remaining three or four years undisturbed. A division of its roots may be made in spring, when increase is required. It will grow in any loamy soil.

Hort. Kew. 2, v. 2, 181.

HELE'NIUM UNDULA'TUM.

WAVED-LEAVED HELENIUM.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration.	Cultivated
California.	3 feet.	Aug. Sept.	Perennial.	in 1830.

No. 600.

Our present generic term is the representative of the Greek ELENION of Dioscorides. Professor Martyn mentions it as from Helen, the wife of Menelaus, who, as Hesychius says, cultivated a plant that destroyed serpents: according to other fabulists, this plant sprung from her tears.

As we cannot find any description of the present plant, we have called the species undulatum. It most probably was raised from imported seeds, a few years ago, but we have no clue to its history. It is a handsome showy plant for giving variety to the flower borders in the latter part of summer, and will grow in any common soil. Yellow flowering plants of the natural order Compositæ show themselves rather abundantly towards the end of summer; there is, however, ample space for one that is so distinct in its general appearance as the Helenium undulatum.

It is probable that under favourable circumstances this plant will perfect its seeds, but this we have not hitherto observed to be the case. It may be divided at the roots if increase be required, and succeeds in any situation.

Sedum spurium. ½

Soldanella minima.

Campanula muralis. ½

Thymus azureus.

SE'DUM SPU'RIUM.

SPURIOUS SEDUM.

Class.
DECANDRIA.

Order.
PENTAGYNIA.

Natural Order.
CRASSULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Caucasus.	4 inches.	August.	Perennial.	in 1816.

No. 601.

The name of this genus has arisen from the general habit of the plants it contains: they oftentimes spread upon rocks and dry places, where their roots cannot insinuate themselves; hence they may be said to sit upon, instead of grow into, the matter beneath them. This circumstance is alluded to in the word Sedum, from the Latin sedeo, to sit.

Low succulent plants, like the present, are remarkably ornamental when planted on artificial rock-work; they maintain their vitality and verdure unimpaired in the open garden, even when the chill breath of winter has congealed the subtle fluids, and destroyed all the grandeur of its loftier neighbours. The presence of a proportion of evergreen plants is as indispensable in the open herbaceous parterre as in the shrubbery. The winter appearance of the flower garden should always have its due proportion of attention; and it is by such plants as the Sedums, Saxifrages, and numerous other similarly hardy evergreen subjects, that it may be relieved from barrenness and aridity. We have oftentimes alluded to the advantages presented by masses of artificial rock-work, and also by stone

borders, in small gardens where every thing may be said to be artificial. They tend to give relief in various ways. A level surface may be conveniently raised into inequalities; and deformities may be concealed; a variety of colour may also be obtained by the use of different materials, as gypsum, tufa, quartz, flints, fragments of lime-stone, granite, marble, or other hard rocks; also over-burnt bricks and refuse from iron-works may form prominent auxiliaries; in fact, no material in stone is too rude for such use. Sandstone is somewhat objectionable from its encouragement of moss.

If a rocky mound, or a raised border, be required, the earth being first thrown together in the shape desired, it is but necessary to cover it in the rudest manner with such of the above-mentioned materials as can be obtained, and the picturesque may be made to reign where dull monotony previously existed. Those who cultivate very small gardens may surprise themselves by their own creations out of such chaotic materials; they will, too, increase their space for plants, for the superficial content of their rock-work, or lapidarium as it may be called, will be greater than the flat surface of the garden forming the base on which it is raised. It is, however, only in such gardens that the inexperienced should venture his manufacture of these objects of attraction, for wherever natural scenery is to be considered, and the extent of ground occupied would lead the scientific eye to look for character of landscape, it then should be a matter of consideration for the man of experience, whether such auxiliaries as rock-work are admissible.

Don's Syst. Bot. 3, 116.

SOLDANEL'LA MI'NIMA.

LEAST SOLDANELLA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
PRIMULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Switzerland.	2 inches.	April, May.	Perennial.	in 1823.

No. 602.

The plant to which the ancients applied the name Soldanella had leaves which they fancied like little plates of metal or gold coin, whence the name, from the Greek SOLOS, a plate of metal; or SOLIDUS, a coin.

We would remind our readers that Solidus was first adopted by Constantine as the name of a coin; and that in the early part of the fourth century, under this converted Roman monarch, Christianity extended itself with power and rapidity somewhat supernatural.

This is a remarkably pretty alpine plant, which always presents a lively tuft of green foliage, and when growing on stone borders, or rock-work, between pieces of white gypsum, or large fragments of tufa, is ornamental at all times. We need not insist on the advantageous effect of such additions as these to the flower garden, to such, at least, as are entirely of artificial character.

The Soldanella minima is not so hardy as one or two others of the genus, but where alpines are not cultivated in pots, it may be planted on a stone border, and have a slight protection during frosts.

CAMPA'NULA MURA'LIS.

WALL CAMPANULA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
CAMPANULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S. Europe?	6 inches.	September.	Perennial.	in 1835?

No. 603.

The flowers of this novel and interesting species of Campanula bear less of the characteristic shape implied by their name than most others of the genus. The deeply divided and spreading lobes of its corolla almost destroy its campanulate or bell-like shape. It has been called Portenschlagiana by the German botanists, Römer and Schultes.

The Campanula muralis is a remarkably pretty plant, and although its flowers are not of brilliant colour, their delicacy and number render them very ornamental.

It has not been introduced to this country a sufficient length of time for its habits to become perfectly known, therefore it will be prudent that the cultivator protect a plant of it in the cold frame, lest by full exposure the whole be lost. It may be increased by dividing its roots in spring or autumn; or by cuttings of the young shoots, which will strike root under a hand-glass, on a shady border; but the more readily if put on a hotbed. It may also be raised from seeds. When kept in pots, a mixture of peat, loam, and sand, with abundance of drainers, is very congenial to its growth.

THY'MUS AZU'REUS.

AZURE THYME.

Class.
DIDYNAMIA.

Order.
GYMNOSPERMIA.

Natural Order.
LABIATÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S. Europe.	2 inches.	June.	Perennial.	in 1830?

No. 604.

The name, Thymus, has been handed down to us from the ancient Greeks; probably deduced from THUMOS, strength. When difference of opinion exists with regard to the derivation of the name of a plant, we may with some degree of safety incline to that which is made to indicate quality, seeing that the ancients studied plants chiefly to ascertain their medicinal properties, and very frequently named them accordingly. Notwithstanding the boasted refinement of Athens, the botany of the Athenians shows them to have been very deficient in the exact sciences.

This species of Thyme spreads closely over the surface of the soil; it partakes of the perfume of its congeners, and continues in flower several weeks. It merits a place in every collection of alpines, whether kept in pots, or cultivated in a compartment adapted to the peculiar wants of this class of plants. These peculiar wants are fewer than is generally supposed,—peat soil and shade in summer constitute their principal requirements, as far as these differ from flowering plants generally. It may be divided at any time of the year.

Gerberia crenata. ⅝

Gagea fascicularis. ⅝

Galega officinalis. ⅝

Teucrium hyrcanicum. ⅝

GERBE'RIA CRENA'TA.

CRENATED GERBERIA.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration.	Introduced
C. G. Hope.	6 inches.	August.	Perennial.	in 1822.

No. 605.

Gerberia has been established as the name of a genus in honour of Gerber, a naturalist of Germany, who is chiefly known from his Travels in Russia.

When this very attractive syngenesious plant was first introduced to Great Britain, it was cultivated in the greenhouse; and, under such treatment, it may be advantageously kept by those who have the convenience of doing so. Those, however, who have no such convenience, may avail themselves of its attractions by cultivating it in a pot, and affording it the protection of a cold frame during winter. Unlike many of the alpines it will bear the sun of summer, and consequently may be sunk in its pot in April or May, in the open parterre, for flowering; and in October be again removed into its winter quarters. It should be potted in earth, composed of peat, loam, and sand; and an ample quantity of drainers should occupy the bottom of the pot. This latter precaution will never be forgotten by the attentive cultivator. It may be increased slowly by division in the spring; and also by seeds, which are sometimes perfected.

GA'GEA FASCICULA'RIS.

BUNDLE-FLOWERED GAGEA.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
ASPHODELACEÆ.

Native of Britain.	Height. 4 inches.	Flowers in April.	Duration. Perennial.	Inhabits Woods.

No. 606.

The generic name, Gagea, was adopted in honour of Sir Thomas Gage, an indefatigable collector of rare European plants; and, says Mr. Salisbury, whose liberality in distributing them places his name very high among those of his contemporaries. It is a pleasing task to register the actions of those men who are zealous in the pursuit of science, and who derive their chief gratification from the virtuous pleasure they afford others. They should ever be held up as models for the stimulus of future generations.

Mr. Salisbury seems to have been led to the separation of Gagea and Ornithogalum, from the discrepancy of their inflorescence, or the mode in which their flowers are disposed; observing that in the same genus we seldom find a real spike and corymb, fascicle and panicle, umbel and raceme, conjoined.

The Gagea fascicularis is chiefly valuable on account of its early flowering. It wins our affections when every sunbeam brings with it an excitement to floral love. It flourishes in a sandy soil, and may be increased by its offset bulbs.

Loudon's Ency. Pl. 276.

GALE'GA OFFICINA'LIS.

OFFICINAL GOAT'S RUE.

Class.
MONADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Spain.	4 feet.	July, Sept.	Perennial.	in 1568.

No. 607.

From the Greek GALA, milk, the name of the present genus is believed to have originated. It may be presumed that the Greek plant formed nutritious food for cattle, and that it encouraged their produce of milk.

Galega officinalis (of which there is a white, as well as lilac, variety) is deservedly a favourite plant; and being so completely hardy, as well as showy, it is not unfrequently met with. It always possesses a cheering luxuriance with its gaiety; and by a little attention the duration of this luxuriance may be considerably prolonged. If its stems be cut back before they have exhausted themselves in flowering, they will produce healthy young shoots which will blossom later in the season than those of the first growth.

This is a practice which we think worthy of attention both by florists and horticulturists. If the usual growth of a plant be thwarted, it will generally be found that its powers will exhibit themselves through some other channel. Cutting back the stems, as above mentioned, is simply pruning with a particular view—that of protracting the matu-

rity of the plant, by destroying a portion of the work which it has already done, and thereby obliging it to commence again. If the strength of the plant be not too far exhausted by its progress towards the production of flowers and fruit, its business of the season will still be performed. Accident will oftentimes teach us useful lessons. The last spring (1837) was one of unusual severity and delay of vegetation, but useful as a preceptor. In several instances we observed the flower-buds of the Mou-tan Pæony entirely destroyed, but this did not thwart the purpose of the plants; luxuriant young shoots were emitted, bearing a second crop of buds, and these flowered delightfully, but later than usual in the season. The early shoots of many Roses were destroyed by frost. A second and luxuriant produce has ensued, yielding abundance of flowers as late as the end of July. The first shoots of Roses are frequently cut back to occasion a late bloom. If the stems of Raspberries be cut down in February to within a few inches of the ground, the growth of the young bearing shoots will be so retarded, that their fruit will not ripen till autumn. The principal crop of Alpine Strawberries, also, may be delayed by taking off their early blossoms.

The simplers of by-gone ages used the Galega in many diseases; and Johnson, the editor of Gerard's Herbal, reports that "the juice of the leaves, or the leaves themselves, bruised and applied to any part, swollen by the sting of a bee or wasp, mitigate the pain, and are a present remedy."

It will grow in any sort of garden soil, and may be divided in almost any season.

Don's Syst. Bot. 2, 228.

TEU'CRIUM HYRCA'NICUM.

HYRCANIAN GERMANDER.

Class.
DIDYNAMIA.

Order.
GYMNOSPERMIA.

Natural Order.
LABIATÆ.

Native of Persia.	Height. 18 inches.	Flowers in Aug. Sept.	Duration. Perennial.	Introduced in 1763.

No. 608.

The word Teucrium is expressly mentioned by Pliny as derived from the name of Teucer, a Trojan prince, who lived about the time of Achilles. We will give Pliny's account of the subject, according to Holland's translation. "Teucer gave the first name and credit to one special herb, called after him Teucrion. Sovereign it is for the swollen and hard spleen; the knowledge of which property came by this occasion, as it is credibly and constantly reported. It fortuned upon a time when the inwards of a beast, killed for sacrifice, were cast upon the ground where this herb grew, it took hold of the spleen or milt, and clave fast unto it, so as in the end it was seen to have consumed and wasted it clean"!

This is a rather stately and upright plant, which shows well in the garden, although its flowers, individually, are small. It should be planted in a light soil and dry situation, or it will sometimes be destroyed in the spring. To meet such contingency a plant should be protected in the cold frame. It may be increased by seeds or division; or by cuttings, taken when three or four inches long.

Hort. Kew. 2, v. 3, 368.

Silene regia. 1/2

Trigonella Ruthenica.

Puschkinia scilloides. 2/3

Primula longifolia. 1/2

Walter sculp.

SILE'NE RE'GIA.

SPLENDID CATCHFLY.

Class.
DECANDRIA.

Order.
TRIGYNIA.

Natural Order.
SILENACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America	2 feet.	June, July.	Perennial.	in 1811.

No. 609.

Silene, from SIALON, saliva. The name alludes to the saliva-like exudation of most of its species.

Amongst the very numerous plants of the genus Silene, there is not, we believe, a more beautiful one than that which we now figure. Upwards of two hundred and fifty species have been described, of which, eleven only are natives of Great Britain.

Of the plants comprised in the order, Silenaceæ, of which Silene is the type, it is observed by Dr. Lindley, in regard to their properties, that they are remarkable for little except their uniform insipidity. When it is considered that they are so widely scattered over the globe, even from the frigid zone to the tropics, we should be led to infer that their properties or their utility, are not, and perhaps never can be, fully appreciated by man.

It will be safest that young plants of the Silene regia be kept in the frame, during winter; for although it is a native of North America, it is liable to be destroyed when vegetation commences in the spring. A mixture of peat loam and sand, is congenial to its growth. May be increased from seeds, or by division of its roots.

153 Don's Syst. Bot. 1, 413.

TRIGONEL'LA RUTHEN'ICA.

RUSSIAN FENUGREEK.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Russia.	18 inches.	July.	Perennial.	in 1741.

No. 610.

The name Trigonia is deduced from the Greek TREIS, three; and GONIA an angle. Trigonella is its diminutive.

This is a pretty trailer, which flowers abundantly, and is suitable for mingling with low plants and embellishing the front of borders. Its flowers are small, but their abundance and continuance compensate for any deficiency that may arise on this account. Humble plants, to carpet the parterre, are just as requisite as menials to perform the like office in the mansion. Society, on the broad scale, must be imperfect if deprived either of the lofty or the humble.

To this genus belongs the Fenugreek of the shops —the Trigonella fœnumgræcum; seeds of which are imported from the southern parts of France and Germany, and sometimes used in cataplasms and fomentations, for maturing or discussing tumours. They are also frequently used as an ingredient in horse powders, but their virtues are little thought of by those who administer them.

The Trigonella Ruthenica is a perfectly hardy plant, and will grow in any common garden mould.

Don's. Syst. Bot. 2, 176.

PUSCHKI'NIA SCILLOI'DES.

SCILLA-LIKE PUSCHKINIA.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
LILIACEÆ.

Native of Siberia.	Height. 4 inches.	Flowers in May.	Habit Bulbous.	Introduced in 1819.

No. 611.

The name Puschkinia, (an unattractive word to the eye) has been adopted by Adams, a Russian botanist and traveller, in compliment to his contemporary, Count Puschkin.

This is a plant which is at present but rarely met with, even in the best collections. The specimen from which our drawing was made, was obligingly supplied to us by the Messrs. Pope, of Handsworth, Staffordshire. It is one of those which may suitably join with Hyacinthus, Scilla, Lachenalia, and Narcissus, in realizing the effect so expressively described in antiquated style, by the father of English poets, Chaucer, who sings

"Of flouris yelowe, white, and rede,
Suche plente grewe there ner in mede,
Ful gaie was all the grounde and queint,
And poudrid as men had it peint,
With many a freshe and sondry floure,
That castin up ful gode savour."

Puschkinia scilloides should have a slight covering to prevent frost from penetrating to the bulbs. It should be remembered that all plants are the most impatient of cold when vegetation commences.

Loudon's Ency. Pl. 278.

PRIM'ULA LONGIFO'LIA.

LONG-LEAVED PRIMROSE.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
PRIMULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Levant.	9 inches.	May.	Perennial.	in 1790.

No. 612.

The whole of the Primrose family carry with them so many pleasing associations, that the name Primula, from primus, a first flower of spring, may as applicably have arisen from primus, a first flower in our affections. None can bestow a thought on the primrose-decked banks, and the bright green meadows, strewed over with cowslips, unmoved by pleasureable recollections of spring.

There's not a heath, however rude,
But hath some little flower,
To brighten up its solitude,
And scent the evening hour.

There's not a heart, however cast
By grief and sorrow down,
But hath some memory of the past,
To love and call its own.

The Primula longifolia is one of those engaging species which are far best cultivated in pots, with the auriculas or alpine plants. Having a little protection during the severity of winter, it will show itself in full beauty, although modestly, amongst those engaging subjects which are so impressively referred to by Dr. Duncan in his "Philosophy of

Hort. Kew. 2, v. 1, 308.

the Seasons"—a work written in the true feeling of a naturalist and a divine. In this, he says, "A pious acquaintance, remarkable for the quaint shrewdness of his observations, one day, when walking in a garden, having pulled a flower of exquisite loveliness, after expressing in his own characteristic way, his admiration of its various beauties, took up a clod of the soil in his other hand, and naïvely, but emphatically exclaimed, 'What but Almighty Power could extract that from this?' If there was any thing ludicrous in the manner, there was nothing but truth and sublimity in the sentiment. Every thing in the operations of the Creator is worthy of devout admiration; but I scarcely know any thing in the inanimate world, which brings together and concentrates so many wonders of designing wisdom and benevolence, as the structure and qualities of a flower;—and assuredly not a little is added to the surprise and pious feeling with which this delightful production is contemplated, when we think of the crude materials from which it is elaborated. The beauty of form and colour; the sweetness of the fragrance; the delicate and skilful nature of the organization; the careful provisions, the forethought, the contrivance, the suiting of parts, as regards the propagation of the species; the adaptations to the subsistence and enjoyment of the insect tribes,—all produced by the artificial union of a few simple and apparently unfit substances, cannot fail to excite in the reflecting mind the most lively sentiments of astonishment, and to force upon it the conviction, that here, without doubt, is the finger of God."

Arctostaphylos uva ursi.

Lupinus versicolor. ⅛

Iris Pumila. ⅓

Lysimachia hybrida. ½

ARCTOSTA'PHYLOS UVA URSI.

BEAR'S GRAPE.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
ERICACEÆ.

Native of Britain.	Height. 6 inches.	Flowers in April, May.	Habit Shrub.	Inhabits Mountains.

No. 613.

Arctostaphylos is a word compounded from the Greek ARKTOS, a bear, and STAPHULE a grape. Uva-ursi has a similar meaning, and was the name applied to the plant by the herbalists of the sixteenth century. It has been the frequent practice of botanists thus to retain names of old authors as specific names in modern nomenclature. In such cases, the specific name has usually been commenced with a capital letter, to indicate this fact; but to such practice we object, because to render it useful, the capital letter must, in all other specific names, be abandoned; and as many of these are derived from proper names, we esteem such exclusion of the capital to be an inadmissible encroachment on the established custom of grammarians.

This is a remarkably pretty trailing evergreen shrub, and deserves to be much more frequently seen in British gardens, than it is at present, particularly when it is known, that it may be cultivated without difficulty. Withering says "The berries are insipid, pulpy, and mealy. The plant is much used in Sweden to dye an ash-colour, and to tan leather. Half a dram of the powdered leaves given

Don's Syst. Bot. 3, 835.

every, or every other day has been found useful in calculous cases. It was first used for this purpose at Monpelier, and afterwards by Dr. de Haen, at Vienna, who relates several cases, in which it proved of the greatest service. Its success in England has been uncertain. Sometimes the patients found no relief, but thought their complaints rather aggravated than alleviated; whilst in other calculous and nephritic cases, the symptoms have been almost entirely removed. Perhaps, upon the whole, we shall find it no better than other vegetable astringents; some of which have long been used by the country people, in such complaints, and with very great advantage, though hitherto unnoticed by regular practitioners."

This beautiful little prostrate evergreen requires to be planted in a very light sandy peat, but may occupy either a dry or moist situation. Its culture is sometimes abandoned from the attendant want of success; which arises simply from inattention to its natural habit of rooting as it advances. If its trailing branches be not frequently laid down, and secured as they proceed in growth, they will soon become sickly, and ultimately perish. In the Highlands of Scotland it is found in abundance, in dry sterile places, frequently covering coarse loose sand, where the branches may be traced far from their origin, rooting as they shoot along. Here nature performs the office of the gardener, through the intervention of winds. These sweep along the surface of the earth, and deposit a stratum of sand about the plant, into which it insinuates its young fibrous roots and flourishes abundantly.

I'RIS PU'MILA. var. variegata.

VARIEGATED DWARF IRIS.

Class.
TRIANDRIA.

Order.
MONOGYNIA.

Natural Order.
IRIDACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S. Europe.	5 inches.	May.	Perennial.	in 1800?

No. 614.

For the derivation of the word Iris, see No. 519, and 274. Pumila, from the Latin, little or dwarf.

For the opportunity of publishing a figure of this remarkbly pretty variety of Iris pumila, we are indebted to our kind friend, the Rev. H. T. Ellacombe, of Bitton, near Bristol; who received it, we believe, from some of the continental public gardens, with several of which he is in correspondence. Mr. Ellacombe's collection of hardy herbaceous perennials and small shrubs is of the first-rate class; and for the benefit of those who are seeking valuable plants, we mention that this gentleman is as ready to contribute rareties to those who can appreciate them, as to receive additions to his own floral treasures.

Old authors paid considerable attention to the genus Iris, and although Gerard and Parkinson may have included some distinct species under their name, Chamæiris latifolia minor, still it is more than probable that they were acquainted with several true varieties of our Iris pumila. They all are valuable as garden ornaments, and require but little attention, excepting occasional division.

Hort. Kew. 2, v. 1, 118.

LUPI'NUS VERSI'COLOR.

PARTY-COLOURED LUPINE.

Class.
MONADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Mexico.	2½ feet.	May, June.	Perennial.	in 1825.

No. 615.

The meaning of the name Lupinus has been recently noticed. This species is not unfrequently called variegatus in the gardens.

This, as Dr. Lindley says, is "A very beautiful perennial Lupine, introduced from California by the London Horticultural Society, and hitherto but little known. It has been called in the society's garden a dwarf Lupinus rivularis; nevertheless the affinity of the species seems to be less with rivularis than with Nootkatensis, for it has nothing of an arborescent habit. The decumbent habit of this species renders it well suited for a bed in a flower garden; it produces a great profusion of its pale, many-coloured flowers, breathing the sweet perfume of the field bean, during all the months of May and June." As these are succeeded by abundance of seeds, it will, we trust, soon become a better known ornament of the English parterre.

Lupinus versicolor may be increased by division of its roots, either in spring or autumn. If raised from seeds, they should be sown in April, in the open ground; and one plant only be left in each place. It will grow in any common soil.

Don's Syst. Bot. 2, 368.

LYSIMA'CHIA HY'BRIDA.

HYBRID LOOSE-STRIFE.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
PRIMULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America	18 inches.	July, Aug.	Perennial.	in 1806.

No. 616.

This genus was named after the celebrated Lysimachus, King of Thrace. See No. 564.

Some species of this genus, although very ornamental, are excommunicated from all flower gardens on account of their persevering and unmanageable habit of travelling under ground into the domains of their neighbours. Lysimachia vulgaris will, not unfrequently, make its uninvited appearance on the opposite side of a gravel walk to that in which it was planted. But for this vagrant propensity it would be an acceptable plant.

Such, however, as we have described, is not the habit of Lysimachia hybrida. It remains at home, adding there increase to increase, and becoming an ornament to its own neighbourhood. We are indebted for it to the Garden of the Birmingham Botanical Society, an establishment which, under the judicious management of its admirable curator, Mr. Cameron, is estimated to extend, already to 8,000 species.

Lysimachia hybrida is a scarce plant, and in growth it becomes far more ornamental than a single specimen would indicate. Increase by division.

Loudon's Ency. Pl. 128.

Lilium concolor. ½

Schizopetalon Walkeri.

Cineraria renifolia. ½

Oxytropis Uralensis.

LIL'IUM CON'COLOR.

SELF-COLOURED LILY.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
TULIPACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
China.	2 feet.	July.	Perennial.	in 1806.

No. 617.

The word Lily, deduced from LEIRION, has been previously noticed. The Latin word, Concolor, signifies of the same colour.

Our present plant should not be mistaken for any of the Martagons, from which it differs widely; its petals are more free and open; and, as its name indicates, are of one colour,—devoid of spots or other variegation. It occupies very little space, having a neat upright growth, like most others of the same genus; and grows freely, in light sandy earth, where well protected from excess of moisture. For several years after its introduction to this country, it was cultivated as a greenhouse plant, but has subsequently proved quite hardy; notwithstanding which, it is rarely met with, excepting in extensive botanical establishments.

Our readers need not be informed that a complete collection of Lilies is a novelty in the gardens of amateur cultivators, a circumstance, which may charitably be presumed to have depended on oversight, since the beauty of Lilies is proverbial, and the care which they demand is unimportant. It must, however, be confessed, as very pro-

bable, that it is the facility with which they grow, and the readiness, with which they yield us their splendour, that generates the neglect they have experienced. It surely, is one of the prominent frailties of human nature, that we are incapable of duly appreciating those favours, which are offered to us at little cost. The inference is plain; we place a fictitious value on what we desire, and on what we possess; and it may be instructive to carry our researches further into the affairs of this present life, and endeavour to ascertain what real importance attaches to any of those objects, which we aim to obtain. It may be useful, although disagreeable, to discover that we run after bubbles, which burst in the hand.

Pliny has a curious notice regarding Lilies. His description, probably alludes to some of the Amaryllidaceæ. He says that some fantastical spirits have invented an artificial method of dying Lilies. In July, when they begin to wither, they take them up, and hang them in the smoke to dry. When the roots begin to shoot, about March, they steep them in the lees of deep red wine, or some Greekish wine, and they take up the colour therefrom. Afterwards, they set them in trenches; into which they pour more wine, and by these means the Lilies become purple. Wonderful, he says it is, that a root should take so deep a tincture, as to produce a flower of the same colour. We, also, think it wonderful; notwithstanding which, we shall have much pleasure in hearing from any fantastical spirit, who may be curious enough to try this experiment of the ancients.

Hort. Kew. 2, v. 2, 241.

SCHIZOPET'ALON WALKE'RI

WALKER'S SCHIZOPETALON.

Class.
TETRADYNAMIA.

Order.
SILIQUOSA.

Natural Order.
CRUCIFERÆ.

Native of	Height.	Flowers in	Duration	Introduced
Chile.	2 feet.	May, July.	Annual.	in 1822.

No. 618.

The name, Schizopetalon, is a suitable one for the flower under consideration. It is compounded from the Greek SCHIZO, to cut; and PETALON, a petal; the application of which term, need not be further explained. The species is named after the gentleman who first raised it in this country.

It is probable that the plant was soon lost, after its first introduction—a circumstance not uncommon with annuals, whose habits happen to be unknown. Its clear white flowers are rather curious than showy, their incised petals being somewhat anomalous in the natural order to which this plant belongs.

This Chilian plant will grow and blossom freely in the open ground, in England; but to secure the ripening of seeds, it will be requisite to forward it by the assistance of artificial heat in the spring. It should be sown early in March, in pots of light earth, and placed in a greenhouse or hotbed, of moderate temperature. When the plants are an inch high, they should be put singly into small pots, from which they may be turned into the borders, in May.

Don's Syst. Bot. 2, 268.

CINERA'RIA RENIFO'LIA.

KIDNEY-LEAVED CINERARIA.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Russia.	9 inches.	June.	Perennial.	in 1833.

No. 619.

Many of the species of Cineraria possess a hairy clothing, which gives them an ash-coloured appearance, whence the name, from the Latin cineris, ashes. Renifolia, from ren, kidney; folium, a leaf.

This is a species hitherto but little known; it is entered in the seed list of the Peterburgh Botanic Garden, on the authority of Meyer, through which means it may possibly have been introduced into this country. The regular communication which is now being established between public gardens, in all quarters of the globe, promises to do more for the extension of botanical knowledge, than could possibly be derived from any other source. When such intercourse is well established, its advantages may be expected to continue, inasmuch as they will prove reciprocal. All such establishments have an urgent demand for support, on every one who feels an interest in the spread of a pursuit closely connected with moral consideration.

When cultivated so as to be shown in close masses, or on rock-work, this plant assumes a desirable gaiety. It may be increased slowly by division of the roots, or more abundantly by seeds.

OXY'TROPIS URALEN'SIS.

URALIAN OXYTROPIS.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Siberia.	4 inches.	July.	Perennial.	in 1800.

No. 620.

The word Oxytropis is compounded from the Greek word, OXUS, sharp, and TROPIS, a keel, in allusion to the mucronate, or pointed keel of the flower. This is one of the characters which distinguishes the genus from Astragalus, in which it was formerly included. It is the Astragalus Uralensis of Linneus, and his successors, prior to Decandolle. The specific name Uralensis, was adopted from its being a native of the Ural mountains.

Our charming little Oxytropis is also a native of of Sandy Hills, in Scotland, where in its glossy silken sheen it is an attractive ornament to the botanist. Sir J. E. Smith says it is a very handsome species, even in a dry state the flowers often retain much of their colour, and the herbage all its brilliancy.

It should be potted in light sandy loam, using plenty of drainers, and may be increased by division; or by seeds, which produce the best plants. If, in autumn, the plants do not appear quite healthy, the protection of a cold frame should be given to preserve them from too much moisture; otherwise they may remain exposed during winter.

Don's Syst. Bot. 2, 249.

Pæonia lobata.

Helonias læta.

Phlomis lunarifolia.

Arum triphyllum.

PÆO'NIA LOBA'TA.

LOBED PÆONY.

Class.
POLYANDRIA.

Order.
TRIGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
Spain.	2½ feet.	May, June.	Perennial.	in 1821.

No. 621.

Pæon was a physician of the ancient poets, whom Homer records as having cured Pluto with this herb. We presume, says Sir J. E. Smith, its virtues are altogether reserved for such august occasions, they having never been made manifest on any other, as far as we can learn. The plant is called lobata from its lobed leaves.

The ancient Greeks, as stated by Dioscorides, were acquainted with our Pæonia officinalis and Pæonia corallina. These two plants they considered to be the masculine and feminine of the same species.

The flowers of Pæonia lobata possess a peculiar beauty and delicacy of tint. They assume a handsome globular form, and are altogether different from those of any other species. All the Pæonies are so completely hardy, requiring no attention, and at the same time possessing so much splendour, that it may excite some surprise to observe the deficiency of them in many of the best gardens.

As regards the culture of the Pæony it is most simple. They may be divided in spring or autumn; but the latter time should be preferred.

Don's Syst. Bot. 1, 66.

HELO'NIAS LÆ'TA.

RED-SEEDED HELONIAS.

Class.
HEXANDRIA.

Order.
TRIGYNIA.

Natural Order.
MELANTHACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America.	$6\frac{1}{2}$ inches.	June.	Perennial.	in 1770.

No. 622.

The habitation of the plant originally called Helonias gave occasion for the adoption of the name, from the Greek HELOS, a marsh; but for what plant it was first intended by the ancients is mere matter of speculation for botanists of the present day. Some authors have followed Michaux in nomenclature and the distribution of several allied species into other genera than Helonias, this plant, however, is the Helonias erythrosperma of that botanist.

The natural order to which our present plant belongs is somewhat remarkable for being composed of such as contain poisonous properties. It has, indeed, been said that every species of all the genera included in it, which are more than thirty, possess deleterious qualities. Our well known native Colchicum, Herb Paris, and Tofieldia pulustris belong to it.

Helonias læta was introduced to this country from the river banks of lower Carolina, by the late Lord Coventry. It is usually kept in a pot with alpines, but will bear the generality of our winters unprotected.

Hort. Kew. 2, v. 2, 330.

PHLO'MIS LUNARIFO'LIA

HONESTY-LEAVED PHLOMIS.

Class.
DIDYNAMIA.

Order.
GYMNOSPERMIA.

Natural Order.
LABIATÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Levant.	3 feet.	June, July.	Perennial.	in 1821.

No. 623.

The word Phlomis, is derived from the Greek PHLOGMOS, flame, see No. 464. Names which have been used by the ancients, are usually adopted in preference to inventing new ones, and as the plants to which they were originally applied are generally unknown, it frequently happens that they are given to others which do not bear out their meaning. It was, notwithstanding, a constant object of attention with Linneus, and has been with other botanists, to give old Greek appellations to such plants as most nearly correspond with those to which they were originally applied. In the present instance such attention may be considered to be quite successful, since the leaves of the Phlomis lychnitis have been used in the south of Europe as wicks for lamps, and to such application of the plant originally called Phlomis, the adoption of the name is owing. The Phlomis lychnitis has long slender downy leaves, which are said to be particularly applicable to this purpose.

The Phlomis lunarifolia is a bold and handsome plant for the borders, and continues long in flower. It demands no peculiar care.

Loudon's Ency. of Plants, p. 506.

A'RUM TRIPHYL'LUM.

THREE-LEAVED ARUM.

Class.
MONŒCIA.

Order.
POLYANDRIA.

Natural Order.
ARACEÆ.

Native of N. America.	Height. 9 inches.	Flowers in June.	Duration. Perennial.	Introduced in 1664.

No. 624.

The word Arum, or as our old herbalists have it from the original, Aron, is supposed to have been transmitted to us through the Greeks, from the Egyptians, who applied it to one of the species known to them—the Arum colocasia.

By its beautifully striped spathe this plant is rendered more attractive than the greater part of the hardy species belonging to this curious genus. This peculiarity obtained for it the name of zebra-flowered, by which it is now sometimes known.

The whole of the Arums are more or less acrid, and some are reckoned even poisonous. It is stated by Decandolle that milk in which the root of our present acrid plant, the Arum triphyllum, has been boiled, has been known to cure consumption. Its properties appear to be somewhat analogous to those of our native species—the Arum maculatum, which has for ages, been used medicinally in various disorders, and also as food. Its fresh root when tasted, seems at first insipid, but shortly afterwards evinces its actual quality, by producing a most disagreeable pungency and pricking sensation on the tongue, which will continue for several hours, un-

less it be allayed by the application of milk, or some oily substance such as butter, &c. This acrid property is entirely lost by drying, and the roots become farinaceous and esculent. By maceration a powder is obtained from them, known as the Portland sago. And, furthermore, Parkinson tells us that "In former days the finest dames used the roots hereof to starch their linen, which would so sting, exasperate, and chap the skin of their servants' hands that used it, that they could scarce get them smooth and whole, with all the anointing they could do, before they should use it again."

The seeds of the Arum maculatum, which are contained in those clusters of beautiful scarlet berries, so frequently seen in our hedges, in the latter end of summer, are employed by the French as a cosmetic. They dry them and prepare a powder from them, called cypress powder, of which a wash is made for the skin. Although these berries are admitted to possess the properties of other parts of the plant, we are not sure that they possess any active poisonous quality. Mrs. Rowden, however, warns children from being tempted by them; she says

"The shining berry, as the ruby bright,
Might please thy taste, and tempt thy eager sight;
Trust not this specious veil; beneath its guise,
In honey'd streams a fatal poison lies."

"So Vice allures, with Virtue's pleasing song,
And charms her victims with a siren's tongue."

The Arum triphyllum is adapted to pot culture; or it may be taken up after flowering and be kept in sand till spring. Or, give it a shady border and cover it with tan in winter.

Hort. Kew. 2, v. 5, 307.

Solanum etuberosum. 1/2

Sphenogyne speciosa. 1/2

Pæonia Russi. 1/6

Hyacinthus amethystinus. 1/6

SOLA'NUM ETUBERO'SUM.

TUBERLESS SOLANUM.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
SOLANACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Chili.	1 foot.	July, Oct.	Perennial.	in 1829.

No. 625.

The medicinal qualities of some of the plants which belong to this genus, gave occasion for the use of the name Solanum, from the Latin solor, to assuage pain. The species dulcamara, was held in considerable estimation by ancient practitioners of the healing art, but its use is now very limited. See fol. 109.

This plant bears some resemblance to the Solanum tuberosum, or potatoe, but its much more compact clusters of fine large purple flowers, recommend it as a desirable border ornament, without the fear of its being looked on with contempt, for its alliance with a subject so plebeian as the potatoe. Its smooth stems too, and tuberless roots sustaining a perennial character, remove it still further from our well-known vegetable. The Potatoe, like our present plant, is indigenous to South America, a country not known to us three centuries and a half ago, although we owe to it so many of the necessaries and luxuries of life. It is impossible to glance at this fact without being impressed with the importance of pursuing our researches in those parts of the globe which are at present unexplored. We find

that some exotic productions which we have acquired, perhaps only a few years, or it may be a century or two, are indispensible to our enjoyments, or even to our existence. If then, some of the present necessities of society are dependent on comparatively recent accessions to our list of cultivated vegetables, to what extent may we anticipate changes still to arise from other introductions which may hereafter be made, seeing that so great a portion of the earth's surface remains unknown to man, or at least to man in a state of civilization. That portion of the world, which is now enveloped in barbarism, may hereafter claim the merit of administering to the taste of our refined successors, and we, in the retrospect, may be esteemed as having possessed uncultivated palates, in using so generally a vegetable like the potatoe. Such is the mutability of all sublunary affairs.

The genus Solanum is very extensive, and the interest attached to it has been much increased of late years, by the introduction to this country, of new and beautiful species, many of them natives of tropical countries belonging to both hemispheres, and consequently, demanding hothouse culture. This renders them unsuitable for publication here; but some of them will appear in the BOTANIST at an early period.

The Solanum etuberosum is a perfectly hardy plant, and flowers abundantly for a long time. It may be increased by division of its roots, or rather underground stems; and also by seeds. The aspect or the soil in which it is planted, are not considerations important to its successful culture.

SPHENO'GYNE SPECIO'SA.

SHOWY SPHENOGYNE.

Class.
SYNGENESIA.

Order.
FRUSTRANEA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S.America.	1 foot.	July, Aug.	Annual.	in 1836.

No. 626.

The word Sphenogyne is deduced from the Greek words SPHEN, and GUNE, signifying wedge, and female. The name is thus compounded, in allusion to the wedge-shaped stigma of the genus.

This is one amongst the interesting new annuals lately introduced to our gardens from that great continent of vegetable magnificence, America. It is not alone interesting when in flower, but also when bearing its seeds. These are furnished with a cup-like membranaceous appendage, called the pappus, and become as ornamental as the flower itself, and even more attractive to those who happen to be unacquainted with seeds of this description. If gathered before they become too ripe, they may be kept to mix with such dry flowers as the Xeranthemum, Gnaphalium, and Elichrysum. The pappus is a wing to the seed, which aids its dispersion from the parent plant. It is one of those evident marks of design, which meet the naturalist at every step he takes amongst created beings.

Seedling plants of Sphenogyne speciosa should be raised in a hotbed, so that they may be transplanted into the borders early in May.

PÆO'NIA RUS'SI.

RUSS'S PÆONY.

Class.
POLYANDRIA.

Order.
DIGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of	Height.	Flowers in	Duration	Cultivated
Sicily.	2 feet.	May, June.	Perennial.	in 1824.

No. 627.

The origin of the name Pæonia has been lately explained. The appellation Russi, was given to this plant by the Sicilian botanist Bivona, as a mark of respect towards an individual of the name of Russ.

This is a remarkably showy and fine coloured flower. Its bright corolla and central anthers, like a ruby vessel containing purest gold, rises in strong relief from its deep green foliage. Thus, the Pæony, as Bishop Mant, in his British Months, says,

> "Undaunted to the sun-beams spread,
> Her flame-like rays, and mantle red."

All species of the Pæony are now esteemed as better suited to furnish the borders of the florist than the shelves of the medical practitioner, although, from Galen to Culpepper, they were held in considerable estimation as medicines. For epilepsy, the root was used as an amulet. It was cut into slices, and attached by a string to the neck, and if this failed to effect a cure, recourse was had to the use of it internally, administered in powder.

Like the Pæonia lobata, this species requires no peculiarity of management.

Don's Syst. Bot. 1, 67.

HYACIN'THUS AMETHYS'TINUS.

AMETHYST-COLOURED HYACINTH.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
ASPHODELEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S. Europe.	9 inches.	April, May.	Perennial.	in 1759.

No. 628.

Hyacinthus is a name adopted from the ancient poets. Hyacinth is represented as the friend of Apollo, and as having been, on his death, transformed into this flower.

This pretty species of Hyacinth greets us with its flowers at that season when all animated nature is in the highest degree susceptible of enjoyment; when not only are rational beings aroused from their lethargy of winter, but every living creature rejoices in the possession of life. Then,—then, with Howitt, may we say to man,

> " 'Tis wise to let the touch of nature thrill
> Through the full heart; 'tis wise to take your fill
> Of all she brings, and gently to give way
> To what within your soul she seems to say:
> " The world grows rich in beauty and in bliss
> Past Springs were welcome, none so much as this."

In planting all sorts of bulbs, it is chiefly desirable that a sandy soil be provided for them; and if separate beds be made, these should be raised somewhat above the level of the surrounding ground, that superabundant moisture may the more readily drain off.

Hort. Kew. 2, v. 2, 282.

Aconitum variegatum. ½

Hypericum verticillatum.

Gladiolus floribundus. ½

Phacelia congesta. ½

ACONI'TUM VARIEGA'TUM.

VARIEGATED ACONITUM.

Class.
POLYANDRIA.

Order.
TRIGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S. Europe.	5 feet.	June, Aug.	Perennial.	in 1597.

No. 629.

The generic name, Aconitum, has been referred to several Greek words for its origin. To what we stated under two species of Aconite, already published, we may add, that Theophrastus mentions the plant as having derived its name from ACONIS, a city of Bithynia, where it grew plentifully.

The Aconite is a plant of classic renown, having been fabled as springing from the foam of Cerberus, when Hercules, in the execution of his twelfth labour, dragged the three-headed monster from the regions of Pluto.

Several species of Aconite possess much beauty—none more than the variegatum. It has a lightness and elegance which does not belong to its congeners. Several varieties of it occur—some of them having flowers which are nowise variegated, but entirely blue or white. The upright inflexible growth of this and many other species of Aconite, renders them desirable ornaments for those gardens, in which tying up is unfashionable !

Aconitum variegatum yields abundance of seeds, and from these increase may be obtained: or its roots may be divided at the usual seasons.

Don's Syst. Bot. 1, 61.

HYPER'ICUM VERTICILLA'TUM.

WHORL-LEAVED ST. JOHN'S WORT.

Class.
POLYADELPHIA.

Order.
POLYANDRIA.

Natural Order.
HYPERICEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
C. G. Hope	9 inches.	August.	Perennial.	in 1784.

No. 630.

The meaning of the word Hypericum is involved in much obscurity. It is supposed to have been deduced from the Greek HYPER, above; and EIKON, a likeness, from some fancied power that the plant possessed over evil spirits. This application of the name seems to be the more probable from another name—Fugademonum, which the ancients used for the same plant.

The Hypericum verticillatum was, it seems, introduced to Great Britain so long ago as the year 1784, but was probably lost, and has been lately reintroduced. It is a very distinct species, and forms a lively ornament when planted near the front of the flower border, a situation which it may fairly claim, being neither tall nor spreading.

It has been usual to afford this suffruticose species some protection in winter, which possibly may be unnecessary unless in very severe weather. Those who cultivate alpine plants may of course give it protection with them. It will grow very freely in a mixture of peat, loam, and sand; and may be divided at the root in spring; or cuttings will strike under glass.

Don's Syst. Bot. 1, 611.

GLADI'OLUS FLORIBUN'DUS.

Variety, roseus.

BUNDLE-FLOWERED CORN FLAG.

Class.
TRIANDRIA.

Order.
MONOGYNIA.

Natural Order.
IRIDACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
C. G. Hope.	1 foot.	May, July.	Perennial.	in 1788.

No. 631.

Gladiolus, from the Latin gladius, a sword; in allusion to the shape of its leaves.

It will have been observed by many of our readers that what is usually called the root of the Gladiolus is exactly similar to that of the Crocus. It is a solid mass of cellular tissue, of a character intermediate between the true bulb and the tuber, hence it has, by some authors, been appropriately called a bulbotuber. We would call the attention of our younger readers to these distinctions. The true bulb is composed of numerous coats, enveloping each other, as in the Hyacinth; or of scales, as in the Lily. The tuber cannot be better shown than by the common Potatoe. These distinctions are evident. It should be further borne in mind, that they are not the roots of the plant, for these are the fibrous appendages which emanate from them. The bulbs or tubers are reservoirs of nutriment on which we oftentimes see a plant exist and even grow almost to perfection without the production of roots or the presence of other nutriment than that which is yielded by the atmosphere—a portion, by the bye, much greater than is commonly suspected.

The application of distinct terms to different forms is highly desirable; still, we regard these bulbs, bulb-tubers, and tubers, simply as modifications of the self-same organ of protection. The bulb is but a depressed leafy stem; the bulb-tuber, a depressed stem without either leaves or buds; and the tuber, a depressed subterranean stem with buds, but leafless. Imagine the stem of the Tiger Lily formed of numerous short tubes, each one from the bottom upwards, a little longer, but of smaller diameter, than that beneath it. Again imagine these tubes pressed down, one within the other, as a telescope. Thus the scaly bulb is completed—the leaves of the stem form the scales, and the little stem bulbs become the offsets in their axils. Somewhat analogous would be the formation of the other two varieties.

The above may be regarded as examples of prominent differences only, which occur among these conservative organic masses; but so diversified are the works of creation, and so easy the gradation from link to link through the great chain of nature, from the lowest form of inorganic matter to the most perfect of animated beings, that numerous intermediate forms occur between these well-developed tubers and bulbs. We merely desire that our juvenile friends should not pass heedlessly by diversity of form and evidence of omnipotence, since it is a privilege of rational beings to understand, and to receive pleasure from, these works of perfection.

Bulbs of the Gladiolus floribundus may be planted in April, and taken up again in autumn.

Hort. Kew. 2, v. 1, 101.

PHACE'LIA CONGES'TA.

TUFTED-FLOWERED PHACELIA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
HYDROPHYLLACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
Texas	1½ feet.	July, Sept.	Annual.	in 1835.

No. 632.

The name Phacelia is derived from the Greek PHAKELOS, a bundle; and is intended to allude to its crowded form of inflorescence.

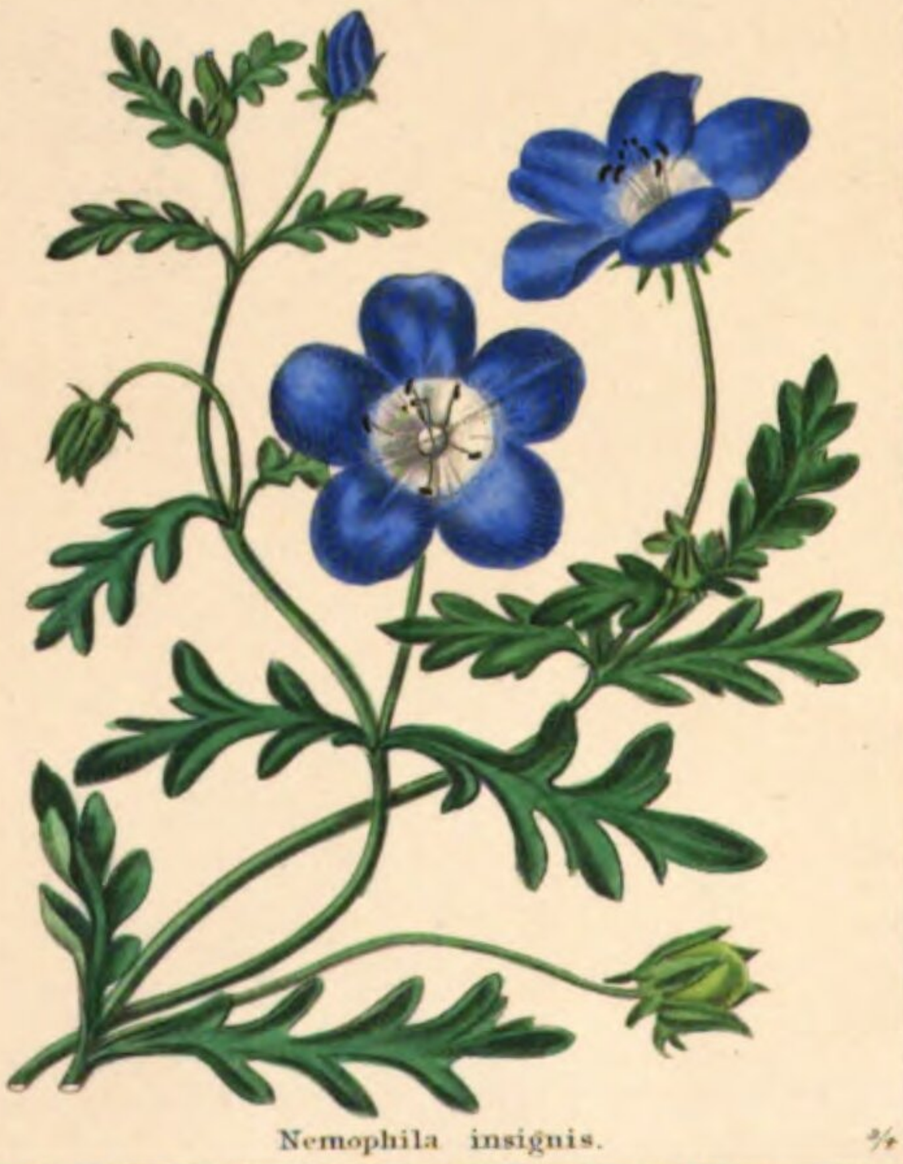
This newly-introduced annual was raised from seeds received in this country from the late Mr. Drummond, which he had collected in Texas, a portion of the west coast of North America which has proved remarkably productive of beautiful plants. Its pinnate leaves possess great diversity of character, some of the leaflets having petioles, whilst some are without; some pinnatifid, whilst others are lobed, or perhaps but little more than serrated. This variation of character appears to hold good with the entire plant also, for in cultivation it will be found to be branched, with wavy stems, whilst in its native situations, according to Sir W. J. Hooker, it is simple and upright.

The habit of this plant well suits it for "bedding out" as our nurserymen say; that is, for covering entire beds. It is, however, equally suited to the mingled parterre. It commences flowering early and continues it till late in the season. May be treated as common annuals.

Bot. Mag. 3452.

Tropæolum tuberosum. ½

Orobus pisiformis. ½



Nemophila insignis. ½

Deutzia scabra. ½

TROPÆ'OLUM TUBERO'SUM.

TUBEROUS INDIAN CRESS.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
BALSAMINACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Peru.	3 feet.	September.	Perennial.	in 1827.

No. 633.

The name Tropæolum is founded on the Greek TROPAION, a war-like trophy, its leaf representing a shield, and its flower a helmet. See No. 427.

This plant which is now assuming a character of interest amongst horticulturists has been in this country at least ten years, yet scarcely ever heard of. It now, however, bids fair to become a more important object of culture, since it is known to produce tubers which have been used as food by the inhabitants of its native country—Peru. This may, however, be the fact without their being of sufficient importance to be considered really an article of subsistence. Neither their quality nor the productiveness of the plant in our climate, are yet sufficiently proved to enable us to form a just estimate of their value. In the cooked tubers there is a perceptible flavour of garden cress, with a little also of its warmth. Like Jerusalem Artichokes, and some other vegetables of the English garden, which are acknowledged to be palatable and wholesome, it may never become a successful competitor for public favour with such of our esculent vegetables as are common alike to the tables of the rich and the poor.

In the beginning of May, 1837, we put a strong plant out of a pot into the open ground, which grew vigorously, but did not produce flower buds till the end of September, and these had not time to expand before the commencement of frost. It produced upwards of sixty tubers, some as large as a middle-sized potatoe. Our figure was taken from a plant in the Birmingham Botanic Garden, and Mr. D. Cameron, the Curator, has obligingly favoured us with the result of his own experience and observations, from which we extract the following account. A quantity of tubers were planted in the open ground before they began to grow; others when the stems were six inches high; and other plants were raised from cuttings, and planted out late in the season. The produce of all was nearly alike, and about half a bushel of tubers was obtained from thirty plants. Mr. Cameron does not think this any criterion by which to judge of the prolific powers of the plant, for it appears that the tubers are so freely produced from the underground stems, and young suckers, that by proper encouragement of this tendency, an increase greatly exceeding that of the potatoe may, very probably, be obtained.

The tubers should be planted in a rich soil, in April, three feet apart. In September, when they begin to form young tubers, many of the stems should be much shortened, and at the same time the plants earthed up with half a wheelbarrow full of rich light soil. This will encourage the produce of suckers, and afford them earth in which they will, doubtless, form an immense quantity of large tubers. For flowering it should be trained to a wall.

Don's Syst. Bot. 1, 747.

O'ROBUS PISIFOR'MIS.

PEA-FORMED BITTER-VETCH.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration.	Cultivated
S. Europe.	1 foot.	May.	Perennial.	in 1832.

No. 634.

Orobus compounded from the Greek ORO, excite; BOUS, ox, indicating an exciting or fattening property.

Orobus belongs to a natural order—Leguminosæ, than which there is none more important. It possesses, too, a peculiarity worthy of notice. This is, as Dr. Lindley says, in his Introduction, the highly irritable nature of the leaves of many species, and of the tendency to irritability discoverable in them all; in consequence of which some botanists have placed them at the extremity of their system, in contact with the limits of the animal kingdom. Dutrochet, who endeavours to show that this motion is the effect of galvanic agency, might, says Lindley, have been satisfied with attributing the phenomenon to an inherent vital action, without puzzling himself with a vain search after first causes, which always leaves the most successful enquirer exactly where he set out.

The present is a desirable plant, with the habit of Orobus vernus. Raised by the Messrs. Pope, of Handsworth, from seeds received from the German Union, under the name adopted. It does not accord with any character of which we are in possession.

NEMO'PHILA INSIG'NIS.

SHEWY NEMOPHILA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
HYDROPHYLLACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
California.	18 inches.	August.	Annual.	in 1833.

No. 635.

Nemophila, from the Greek NEMOS, a grove; PHILEO, to love.

Wherever this newly-introduced annual has been cultivated it has become a decided favourite. The beautiful blue tint of its flowers is by no means common amongst either our annuals or perennials in cultivation, a circumstance which alone is a prominent recommendation. Variety constitutes one of the principal objects of all who desire to possess a GAY flower garden. This species was introduced by the London Horticultural Society, having been discovered in California, by their indefatigable collector, the late David Douglas.

In cultivation, in our gardens, all the species of Nemophila appear to be rather delicate, requiring somewhat more attention than many of our older favourites. This species seems to suffer if exposed to a long continuance of wet weather in summer; notwithstanding which, if sown in autumn it will generally bear our winters. The young plants should be raised in April, in pots, with the assistance, if convenient, of a little artificial heat. When an inch or two high, they may be turned into the open ground.

DEUT'ZIA SCA'BRA.

ROUGH-LEAVED DEUTZIA.

Class.
DECANDRIA.

Order.
TRIGYNIA.

Natural Order.
PHILADELPHACEÆ.

Native of Japan.	Height. 6 feet.	Flowers in May.	Habit. Shrub.	Introduced in 1833.

No. 636.

This genus of plants was named by Thunberg, the Swedish botanist, in honour of John Deutz, of Amsterdam, a person who rendered Thunberg assistance in his botanical researches in Japan.

Great Britain is indebted to John Reeves, Esq. for the introduction of this desirable hardy shrub, from Japan. It resembles the Philadelphus coronarius, or common Syringa of our shrubberies, but is of rather more slender habit, neater appearance, and does not appear likely to grow so large. It yields a profusion of flowers at a season when all nature is most capable of enjoying them, and soon will, we trust, be found in every respectably planted shrubbery,

> "Where odorous plants in evening fair,
> Breathe all around ambrosial air." GREEN.

As well as desirable for the shrubbery, it may be made available for pot culture, and probably by confining its roots, may be kept small, and not unsuitable for mixing with low American shrubs. Cuttings of the young wood strike readily. Or, it may be increased by layers, and will grow in the usual soil of the garden.

Don's Syst. Bot. 2, 808.

Lilium superbum. 1/3

Scutellaria macrantha. 1/2

Calandrinia speciosa. 1/2

Spiræa barbata. 1/2

LIL'IUM SUBER'BUM.

SUPERB LILY.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
TULIPACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America	6 feet.	June, Aug.	Perennial.	in 1727.

No. 637.

For the meaning of the word Lilium see No. 292.

This may truly be called the superb Lily, growing as it sometimes does, to the height of eight feet, and bearing upwards of forty flowers at once. (Gard. Mag. 13, 347.) This observation, however, applies to its growth, as seen near Antwerp; in our own gardens its average height is from five to six feet; its flowers from ten to twenty in number; and even in this degree of luxuriance very few plants excel it in splendour. We shall be extremely glad to observe that attention is excited in favour of this genus of bulbous plants, on account of their splendid and generally hardy character.

In a physiological point of view the various distinctions observable amongst bulbs is full of interest. Their numerous forms and uses, their adaptation to the circumstances under which they exist, and their gradual transition to stems on the one hand, and roots on the other, all tend to excite the contemplative mind to enquiry. We see a beautiful and infinite variety every where presented to us in the works of nature, and man seeks for primary causes of this exuberant effect; but if he forget

that First Great Cause on which all others depend, he is quickly surrounded by doubts and difficulties, and finds his reasoning degenerate into conjecture. We sometimes look on the effect, and discover the agent by which it was produced—the human mind is then too frequently satisfied. True philosophy would pursue the subject still further; and thus we should not stop short of that admiration of Divine Power, and humiliation of our own wisdom, which is becoming our present state of dependence—a dependence nowithstanding, under which all may so freely enjoy the boundless riches and beauty every where presented to their contemplation.

The bulb and the bud, in the economy of nature are nearly identical. But the former, from its individuality, necessarily contains a reservoir of nutriment to sustain the young plant; which from the latter, on account of its attachment to the parent tree, is not required. The bulb may be said to suckle its young till its roots strike forth and collect a due portion of nutriment for its support; whilst buds give their offspring into the arms of the parent plant as a mature and efficient nurse. Both the bulb and the bud are, however, identical in their office of protection of the future vegetable, being, as Linneus observes, its hybernaculum or winter quarters, an idea which Dr. Darwin has forcibly alluded to in the following lines:

"There dwell my vegetative realms benumb'd,
In buds imprison'd, or in bulbs entomb'd."

This fine plant is perfectly hardy, and should be planted in a peat bed. It may be increased by offsets of its scales.

Hort. Kew. 2, v. 2, 242.

SCUTELLA'RIA MACRAN'THA.

LONG-FLOWERED SCULL-CAP.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
LABIATÆ.

Native of	Height.	Flowers in	Duration	Introduced
Siberia	9 inches.	July, Sept.	Perennial.	in 1827.

No. 638.

For the derivation of the generic name Scutellaria, see No. 397. The calycine appendage to which it alludes is not unworthy the attention of the general observer as well as the botanist.

Most of the plants which we include within the limits of the genus Scutellaria are low but ornamental subjects for the flower border. The present species is, however, the handsomest with which we are acquainted, and well deserves a place in every good collection. In our remarks, under Scutellaria lupulina, No. 555, we have noticed a peculiarity of this genus that should not be forgotten. After the decay of the flowers the calyx closes over the seeds. These are not permitted to fall when ripe by its again opening, but by the separation of a small convex portion of its upper lip. These evidences of design meet us at every step through the flower garden, and afford objects of pleasing interest as well as lessons of instruction to every well-directed mind.

Scutellaria macrantha possesses a long fusiform root, therefore should be planted in a deep light soil. It may be readily propagated from seeds.

CALANDRI'NIA SPECIO'SA.

SHOWY CALANDRINIA.

Class.
DODECANDRIA.

Order.
MONOGYNIA.

Natural Order.
PORTULACEÆ.

Native of Chile.	Height. 1 foot.	Flowers in August.	Duration. Perennial.	Introduced in 1833 ?

No. 639.

The genus Calandrinia, was named by Humbolt and Bonpland in honour of the Genevese botanist, J. L. Calandrini.

This showy plant attracts not alone by its flowers but also by its pale glaucous succulent foliage, which is itself ornamental to the flower border. Two other species, grandiflora and discolor, possess a nearly similar appearance, excepting that the latter has its leaves of a purplish pink colour beneath. These plants are tender perennials, and would not come within the professed limits of the Botanic Garden, but that they may be cultivated as annuals, and will flourish in the open ground, during summer, where they will flower later or earlier in proportion to the attention paid to their propagation.

The most sure method of cultivating the Calandrinia speciosa is to sow the seeds in March, or early in April, in a pot of light soil, placed in a hot-bed. As soon as the seedlings are strong enough to bear removal they should be transplanted, singly, into small pots to remain to strengthen, and then be gradually hardened, for turning out with their balls of earth entire, in May.

Bot. Mag. 3379.

SPIRÆ'A BARBA'TA.

BEARDED SPIRÆA.

Class.
ICOSANDRIA.

Order.
DI-PENTAGYNIA.

Natural Order.
ROSACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Nepal.	4 feet.	June.	Perennial.	in 1835.

No. 640.

Spiræa, from the Greek SPEIRA, a cord. See No. 153. The term barbata, bearded, is used in allusion to a little cluster of hairs which occurs at the base of each petiole. In the nurseries this plant is known as Spiræa Japonica, a name which was given it on account of its introduction to Belgium from Japan, by Doctor Von Sieboldt. It had, however, been previously discovered in Nepal, by Doctor Wallich, and by him named barbata.

This handsome species of Spiræa was transmitted to England from Belgium, and proves to be a most desirable addition to the genus. Its tall and delicate racemes of flowers will form an elegant background in the parterre to plants of lower stature. The specimen of this novelty from which we derived our drawing was obligingly supplied from the Birmingham Botanic Garden.

It appears to be perfectly hardy, and will grow in any common soil; but, as with the upright Phloxes and plants of similar growth, it may be very advantageous to its luxuriance to remove it occasionally. It may be propagated by dividing its roots, which is best effected in the spring.

Don's Syst. Bot. 2, 519.

Gaillardia bicolor. ½

Gentiana gelida. ½

Nymphæa pygmæa. ½

Delphinium triste. ½

GAILAR'DIA BI'COLOR.

Var. picta.

PAINTED GAILARDIA.

Class.
SYNGENESIA.

Order.
FRUSTRANEA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Carolina.	2 feet.	July, Oct.	Perennial.	in 1834.

No. 641.

The uncertainty which exists respecting the orthography of the Frenchman's name, adopted to distinguish this genus, has given it some irregularity. It is sometimes spelt Gallardia. We have already published the original variety of this plant under No. 100, but the one now under notice possesses so much beauty, and has been sought with such avidity, that we consider a figure of it indispensable. Moreover, this is not a variety which has originated in our own gardens, but was raised from seeds, collected by Drummond in Louisiana, whence they were sent to this country and distributed amongst his supporters.

Considerable difference will be observed amongst the flowers of this varriety, the ray of some of them being wholly of a deep rich sanguineous colour, or tipt in the slightest degree only with yellow, whilst in others the yellow will be seen to occupy nearly half of its surface. Dr. Hooker has observed also that in some of its blossoms which he examined all the florets of the ray had a bilabiate corolla, whilst others were only partially of such character. Our plants had no such peculiarity. The foliage

amongst different individuals is equally variable, some of the leaves being entire, some toothed, and others pinnatifid; some closely covered with a mixture of long and short hairs, whilst others are nearly destitute of such clothing. This inconstancy of character has given rise to the adoption of different names in the nurseries, where plants may be found under the names of Gailardia picta, Gailardia Richardsonii, Gailardia Drommondii, all of which are seedling varieties only of our present subject. This propensity adds to the interest with which the cultivator will propagate this species from seeds. It is a pleasing anticipation that arises in the mind when we merely look forward to the full maturity of a favourite plant, which, with solicitude, we have watched from its birth, and know exactly to what degree of perfection its character and beauty will arrive, to reward our attentions. This pleasure is, however, greatly increased when the perfect qualities of our nursling can be developed by time alone, and the imagination left free to give it healthy luxuriance, to magnify its undeveloped blossoms, and paint them with colours more brilliant than even nature herself. This, we say, is a pleasure well known to the zealous florist, well adapted to produce a favourable influence on his mind; and the judicious enjoyment of it cannot be supposed but pleasing to Him who appointed it for our gratification.

The Gailardia bicolor may be increased by cuttings or division of its roots; or, more advantageously, from seeds which are produced freely. Seedling plants will not flower till the second year.

Hort. Kew. 2, v. 5, 129.

GENTIA'NA GEL'IDA.

ICE-COLD GENTIAN.

Class.
PENTANDRIA.

Order.
DIGYNIA.

Natural Order.
GENTIANACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
Siberia.	1 foot.	June, July.	Perennial.	in 1807.

No. 642.

Gentiana, from Gentius, king of a small state in Europe, on the northern side of the Adriatic, opposite to Italy. To what peculiarity of the plant this specific name applies, we know not.

There are very few prettier genera of low-tufted plants than Gentiana, but they are not always successfully cultivated. Pure air, and not too dry a situation, seems to be most favourable to the species in general. A peaty soil is favourable to this and all the smaller species of Gentian, but indispensable to few. The whole admit of increase by division of their roots.

The opinions of the medicinal qualities of all Gentians entertained by the old herbalists, have been founded on the Gentiana lutea, the roots of which form an article of commerce at the present day. They are imported from the north of Europe, and used chiefly as a tonic and stomachic. Parkinson, in his Paradisus Terrestris, says, "The wonderful wholesomeness of Gentian cannot be easily known to us, by reason our dainty tastes refuse to take thereof, for the bitterness sake, but otherwise it would undoubtedly work admirable cures."

Loudon's Ency. of Pl. 204.

NYMPHÆ'A PYGMÆ'A.

PYGMY WATER LILY.

Class.
POLYANDRIA.

Order.
MONOGYNIA.

Natural Order.
NYMPHÆACEÆ.

Native of	Habit.	Flowers in	Duration.	Introduced
C. G. Hope.	Floating.	May, Sept.	Perennial.	in 1805.

No. 643.

The generic name, Nymphæa, has been continued from the Greek NYMPHAIA of Theophrastus and Dioscorides, a name given to Nymphæa alba, or common white water lily. "It was," says Sir J. E. Smith, "so called, with much taste, in allusion to the nymphs supposed to inhabit those pure and limpid waters where it grows; nor was it an unworthy emblem of the elegance and delicacy attributed to those imaginary beings."

Aquatic plants deserve to meet more of the florist's attention than has been bestowed on them. There is scarcely a garden but may have its little pond, either natural or artificial; and with the aid of this, in addition to the convenience it affords by its continual supply of water where so much is required, many aquatic and marsh plants may be successfully cultivated.

The roots of the Nymphæa pygmæa may be planted in the mud of a pond, where the water is regularly about a foot deep, or it may be kept in a pot of loam, and the pot immersed a little beneath the surface of the water. In winter its depth in water should be a security against frost.

Don's Syst. Bot. 1, 126.

DELPHI'NIUM TRIS'TE.

SAD LARKSPUR.

Class.
POLYANDRIA.

Order.
TRIGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Dahuria.	2 feet.	July, Aug.	Perennial.	in 1819.

No. 644.

Delphinium is deduced from the Greek name of the Dolphin, see No. 29.

This is a somewhat singular species of Larkspur, which may well have the appellation triste, or sad, applied to its blossoms. As an object of singular tint in the garden its flowers will be acceptable; if they do not add brilliancy by direct means, they may assist in giving comparative splendour to other objects, and it is no mean portion of the real artist's ability which he will devote to giving his picture effect by contrasts, for as Sir Joshua Reynolds says "A certain quantity of cold colours is necessary to give value and lustre to the warm colours." Since none have more brilliant colours for their purpose than the florist, it is certain that the effect of them may be heightened by judicious arrangement, although he may not be able to make a picture in nature qualified to carry away the prizes of the Royal Academy.

Apart from all figure, we may make favourable mention of the sober coloured Delphinium, which is perfectly hardy, and may be grown in any common soil, and divided for increase.

Don's Syst. Bot. 1, 54.

Bartonia aurea. 1/6

Orobus canescens. 1/6

Rudbeckia asperv[illegible] 1/6

Lupinus tomentosus. 1/2

BARTO'NIA AU'REA.

GOLDEN-FLOWERED BARTONIA.

Class.
ICOSANDRIA.

Order.
MONOGYNIA.

Natural Order.
LOASACEÆ.

Native of California.	Height. 2 feet.	Flowers in July,	Duration. Annual.	Introduced in 1833.

No. 645.

This genus was named in honour of Dr. Barton, professor of Botany at Philadelphia.

Bartonia aurea is a beautiful annual, but is not very hardy, nor do its polished golden corollas fully unfold themselves and expose its girdle of delicate stamens but under exposure to the sun. It should be raised in a hotbed, and afterwards have a warm situation in the borders, with frequent waterings.

The plants of this genus, indeed of the entire order Loasaceæ, are American. The rapidly increasing importance which attaches to the Flora of this country, must be matter of gratulation to every lover of the science of botany. To the exertions of one man alone, under the auspices of the London Horticultural Society, Great Britain is indebted for two hundred living species of American plants, nearly all them quite hardy, and now forming the principal ornaments of our gardens. Douglas, to whom we allude, trod the wilds of the new world and discovered splendid specimens of vegetation, which from the first dawn of their existence, through countless ages, had flowered in their brilliancy, and breathed out their perfume only for the tenants of the

wilderness. The emotions of a traveller, wandering like Douglas—oftentimes alone, and far from the abode of civilization, surrounded by scenes of wild grandeur, may well be expressed in the language of the Poet:—

Ye bright mosaics! that, with storied beauty,
The floor of Nature's temple tesselate,
What numerous emblems of instructive duty
Your forms create!

'Neath cloistered boughs, each floral bell that swingeth,
And tolls its perfume on the passing air,
Makes Sabbath in the fields, and ever ringeth
A call to prayer.

Not to the domes where crumbling arch and column
Attest the feebleness of mortal hand,
But to that fane, most catholic and solemn,
Which God hath planned.

To that cathedral, boundless as our wonder,
Whose quenchless lamps the sun and moon supply;
Its choir the winds and waves,—its organ thunder,—
Its dome the sky.

There, as in solitude and shade I wander,
Through the green aisles, or stretched upon the sod,
Awed by the silence, reverently ponder
The ways of God,

Your voiceless lips, O flowers! are living preachers,
Each cup a pulpit, every leaf a book,
Supplying to my fancy numerous teachers
From loneliest nook.

Here I, O God! in churchless lands remaining,
Far from all voice of teachers and divines,
Fail not to find, in flowers of thy ordaining,
Priests, sermons, shrines.—H. Smith.
Bot. Reg. 1831.

O'ROBUS CANES'CENS.

CANESCENT BITTER VETCH.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration	Introduced
France.	1 foot.	May, June.	Perennial.	in 1816.

No. 646.

Named from the Greek, as previously noticed, in allusion to its stimulating properties when given as food to cattle.

The natural order, Leguminosæ, is one of the most important in the botanical system, containing as it does, so great a number of agricultural and medicinal plants. The celebrated traveller, Humboldt, calculated that it contains a twelfth part of all the flowering plants on the globe. It has been divided into several tribes by Decandolle, and our present plant belongs to that called Papilionaceæ, from papilio, a butterfly. The young botanist never can fail to identify a papilionaceous or pea-like flower, see Lathyrus odoratus, No. 369.

Orobus canescens is a neat ornament for the border, rendered the more pleasing by the lightness and elegance of its pinnate leaves, &c; which, like most other leaves of similar formation, possess some degree of irritability, and are influenced by the state of the atmosphere—sometimes spreading wide to receive the full benefit of light and heat; at others, falling for protection or repose. It may be increased by division or raised from seeds.

Don's Syst. Bot. 2, 340.

RUDBECK'IA ASPER'RIMA.

ROUGH RUDBECKIA.

Class.
SYNGENESIA.

Order.
FRUSTRANEA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America	3 feet.	September.	Perennial.	in 1833.

No. 647.

The name of Rudbeck is familiar to most botanists. A portion of a work by the elder professor of this name, in the Sherardian Library, at Oxford, should be inspected by every one who has an opportunity of doing so. It is a specimen of the botanical zeal and industry that existed prior to the labours of the celebrated Linneus.

This showy species, named by Professor Hornemann, of Copenhagen, belongs to the genus Echinacea, as established by the German botanist Mœnch. It was raised in the Birmingham Botanic Garden, from seeds communicated by Mr. Hunneman, who had received them from the Continent. We are not aware of its existence in any other collection in this country; it may, nevertheless, have been introduced to others from the same source.

Rudbeckia asperrima, in the open borders, becomes a very showy plant; and, like most others of the same genus, requires but little attention if planted in a light rich soil. The roots may be divided in spring or autumn; but the former season should be preferred, that it may not have long to remain dormant after removal.

LUPI'NUS TOMENTO'SUS.

WOOLLY LUPINE.

Class.
MONADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Peru.	3 feet.	July to Sept.	Perennial.	in 1826.

No. 648.

For the derivation of the name, Lupinus, see No. 310.

Were the fates to decree that we should choose one from amongst the many beautiful species of Lupine, and be deprived of every other, Lupinus tomentosus should be the one we would adopt. Not that it is the most splendid species, for two or three others in some degree excel it; but not one affords us the variety of tint as our favourite tomentosus. Not only are the flowers on the same plant changeable, but seedling varieties will occur of completely different hues from that of the parent. Blue, purple, white, yellow, and every intermediate tint may be found amongst them. It was formerly a maxim that as men sowed so should they reap; but this is no longer indisputable. Even Lupines have caught the changeable character of the times.

Favourite varieties may be increased by division of their roots or by cuttings, but the finest plants are produced from seeds. Propagation by this means affords increased pleasure from the excitement of hope that varieties with new beauties will be obtained.

Don's Syst. Bot. 2, 369.

Cistus Lusetanicus. ⅔

Adenocarpus intermedius. ⅔

Primula Carniolica. ½

Scilla campanulata. ½

Wille del. 163 Watts sculp.

CIS'TUS LUSITAN'ICUS.

LUSITANIAN CISTUS.

Class.
POLYANDRIA.

Order.
MONOGYNIA.

Natural Order.
CISTINACEÆ.

Native of S. Europe.	Height. 3 feet.	Flowers in August.	Habit. Shrub.	Introduced before 1830.

No. 649.

The name, Cistus, has been handed down to us from the Greeks, who, it is believed, founded it on their word KISE, signifying a box; and applied it to their plant from the shape of its seed-vessel. Lutanicus from Lusitania, the ancient name of a portion of Spain, and the native country of the plant under consideration.

This species of Cistus is of late introduction, and must not be confounded with the common Gum Cistus of our gardens, which is both a larger and a hardier species.

Few more beautiful objects are seen in the shrubberry than the various species of this showy genus. The daily produce and decay of their flowers is little less than a wonder, even where all is wonderful. They rise like the sun itself, decked in brilliancy to cheer every beholder; and their brightness gradually fades but to return again with morning.

On dry elevated rock-work, this plant will survive severe winters, still it will be safest to protect young plants in the frame, which may be readily propagated from cuttings of the young wood. It prefers a light loamy soil.

ADENOCAR'PUS INTERME'DIUS.

INTERMEDIATE ADENOCARPUS.

Class.
MONADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Sicily.	3 feet.	March, April.	Perennial.	in 1825?

No. 650.

Adenocarpus is deduced from two Greek words, ADEN, gland; and KARPOS, fruit. This compound word alludes to certain glands with which the legume is beset. Intermedius is, we presume, applied to the character of the plant being intermediate between other species—perhaps Hispanicus and parvifolius.

Adenocarpus has, at present, but six species, all very ornamental plants in spring, when clothed, as they then usually are, with a profusion of brilliant yellow flowers. The genus has been made up, principally, from Cytisus, one of the principal distinctive characters being alluded to in the name, the legume of Adenocarpos having pedicellate glands on all sides, whilst that of Cytisus is glandless. These glands are little appendages found on various parts of some plants; whilst they are not at all discoverable on any part of others. The object which the gland is intended to effect is not at present understood. Linneus's definition does not teach much, he says it is "a little tumour discharging a fluid"; and modern science has not at present disclosed to us anything more satisfactory. Dr. Lindley,

in his admirable Introduction to Botany warns his readers from confounding glands with glandular hairs, but he omits to point out any well-ascertained distinction between them. On no plant is a glandular appendage more prominent than on the Moss Rose. The substance called moss is entirely of this character, and is an interesting object for microscopic examination, to which we would refer our readers for an example of what are called glands. Another instance of the existence of glands in a very different form, may be seen on examining a leaf of the Black Currant. The upper surface of this leaf is quite smooth, and if it be gently scraped with a knife whilst the under surface rests on a soft part of the hand, very little of the odour peculiar to it will be discovered; but if the under surface be so scraped or pressed, it will freely yield its powerful scent. This arises from the under surface being beset with numerous little yellowish pellucid glandular spots, which on examination will be found to contain an essential oil; and these being broken, their fluid will be dispersed over the surface, and give out its peculiar aroma.

Adenocarpus intermedius may be propagated without difficulty by taking cuttings of the young wood, or the young shoots may be slipped off in May or June, and being planted in a shady place under a hand glass, will strike root readily. When sufficiently rooted, which may be known by their growth, they should be potted singly, into a mixture of peat and loam. Although the young plants will bear exposure during a mild winter, it will be safest to protect them in the cold frame.

Don's Syst. Bot. 2, 158.

PRIM'ULA CARNIO'LICA.

CARNIOLIAN PRIMROSE.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
PRIMULACEÆ.

Native of Carniola.	Height. ¼ foot.	Flowers in Mar. April.	Duration Perennial.	Introduced in 1826.

No. 651.

The derivation of the word Primula has frequently been noticed, and as its blossom is one of the earliest of spring to revive our floral enthusiasm, we may hope that our younger readers have not forgotten the application of the name.

This beautiful little Primula is rarely met with in gardens of amateurs, nor, indeed, is it common in our nurseries. Unlike many attractive plants, of late introduction, it cannot be increased without limit, and spread over this island of flowers in a few months as if generated by the summer breeze. No circumstance so prominently shews the interest excited amongst all grades of society in behalf of floriculture as the avidity with which newly-introduced plants are sought and distributed.

The Primula Carniolica being hitherto scarce has usually been protected in the cold frame, during winter; and to possess it in the greatest luxuriance this practice may still be adopted. It appears, however, to be as hardy as others of its continental congeners, and may be planted in peat, on rock-work, with the shade of a stone to protect it from the mid-day sun.

SCIL'LA CAMPANULA'TA.

var. alba.

CAMPANULATE SQUILL.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
ASPHODELACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Spain.	1 foot.	May, June.	Perennial.	in 1683.

No. 652.

Scilla is derived from the Greek SKILLO, to dry. The name alludes to the medicinal drying properties attending the external use of the plant to which it was applied. Our Scilla maritima is supposed to have been the SKILLA of the Greeks, but is now not used as an external remedy.

The coloured varieties of Scilla campanulata are more common than the white, and less beautiful. In the borders the fine racemes of delicately white little bells, in the month of May, are very ornamental, and present themselves at that season when most desirable—when crocuses and their attendants have disappeared, and the summer flowers are only preparing to greet us with their presence. A small collection of Scillas would progressively afford flowers from the beginning of March to the end of June. Scilla Sibirica; bifolia—blue, white, and red; amœna; and campanulata, are all hardy and desirable.

Scilla campanulata increases freely; but will be grown in the greatest perfection by taking up the bulbs when the leaves decay, and planting them a few inches apart.

Hort. Kew. 2, v. 2, 263.

Berberis empetrifolia.

Leucojum autumnale

Zephyranthes candida.

Chrysanthemum Sinense.

BER'BERIS EMPETRIFO'LIA.

CROWBERRY-LEAVED BARBERRY.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
BERBERIDACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S. America.	2 feet.	April, May.	Perennial.	in 1830.

No. 653.

Why the word Berberis was originally adopted as the name of a plant, cannot, now, with any degree of certainty, be ascertained. Its origin has, usually, been assigned to the Arabic language, but some authors think the word is deduced from the Greek BERBERI, signifying a shell.

The late severe winter (1837-8) has proved destructive to some of our newly introduced species of Barberry, but empetrifolia has escaped uninjured; at least, the plant from which we were favoured with our specimen for drawing, has done so. This, perhaps, might be expected of a shrub which is found abundantly about the Straights of Magellan, even to the most southern point of South America, ranging from 50 to 52½ degrees of latitude. It now grows exposed in the garden of the Birmingham Botanical Society. It is a desirable, and in flower, a very ornamental, slender, inclining, shrub—one that would be shown to much advantage if trained to a wall of good aspect. Some of the species which are commonly known as Barberries have been arranged by botanists under a separate genus called Mahonia. The most prominent mark

of distinction in the plants contained in Mahonia is their pinnate leaves; those species retained as true Barberries having undivided leaves, like the common English shrub, published under No. 383.

In our article on the Berberis vulgaris we noticed the irritability of its stamens, a circumstance now pretty generally known; some further particulars of this physiological fact may not, however, be uninteresting to many of our readers. It should be noticed, that although the stamen exhibits a high degree of irritability when touched on that side of its base next to the germ, the same phenomenon does not occur when it is touched on the outside of the filament, nor does the anther possess irritability. It is further noticed by G. Don, in his General System of Botany, that "If the stamen be bent to the stigma by means of a pair of scissors applied to the anther, no contraction of the filament is produced. From all this, it is evident, that the spring of the stamens is owing to a high degree of irritability in the side of the filament next the germ, by which, when touched, it contracts, that side becomes shorter than the other, and consequently the filament is bent towards the germ. This irritability is perceptible in flowers of all ages. If the germ is cut off the filaments will still contract; and nothing being in their way, will bend over quite to the opposite side of the flower."

The Berberis empetrifolia grows freely in sandy peat, and may be increased by laying the young shoots. These will make roots, so as to admit of separation in about twelve months.

Don's Syst. Bot. v. 1, 117.

LEUCO'JUM AUTUMNA'LE.

AUTUMNAL SNOW-FLAKE.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
AMARYLLIDACEÆ

Native of	Height.	Flowers in	Duration.	Cultivated
Portugal.	6 inches.	September.	Perennial.	in 1629.

No. 654.

The name of this genus is of Greek origin, being derived from LEUKOS, white, and ION, a violet.

The Leucojum autumnale is said, by Curtis, to be not only a native of Spain and Portugal, but also of the neighbourhood of Algiers, growing on dry sandy hills; and that specimens have been received also from the Rocks of Gibraltar.

For the plant from which our drawing of this interesting little autumnal beauty was made, we are indebted to the kindness of the Rev. H. T. Ellacombe, of Bitton Rectory, near Bath; a Gentleman whose zeal and activity in the collection and culture of rare hardy plants, is only equalled by his generosity in distributing them to those who appreciate their value. We owe him much gratitude.

This plant is not commonly met with, even in extensive collections, although it was known to the old English botanists, and called a bulbous violet by them, after its original nomenclature.

In dry situations the Leucojum autumnale will not require protection, but in wet retentive soil, during severe frost, it should have a little surface covering.

Hort. Kew. 2, v. 2, 112.

ZEPHYRAN'THES CAN'DIDA.

WHITE ZEPHYRANTHES.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
AMARYLLIDACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Peru.	6 inches.	September.	Perennial.	in 1822.

No. 655.

Zephyranthes, an unexplained generic name, established by the Honourable and Rev. W. Herbert.

This plant we have possessed several years, and it has lived in the borders, without protection, till the last severe winter of 1837-8. A plant which had the protection of a glazed frame was not, however, in the least degree injured, although the inclemency of the season was excessive. Its white unobtrusive flowers continue to be produced for several weeks in the months of August and September. Zephyranthes, says Mr. Herbert, may be looked upon as the Crocus of hot countries.

In planting borders it is customary to place dwarf bulbous plants near to the front; that is, such as Crocusses, Scillas, Jonquills, Van Thol Tulips, Erythroniums, &c., and the plan is reasonable and convenient, inasmuch as annuals and herbaceous perennials may be planted behind them, to spread over the places their dormant bulbs occupy in summer. The Zephyranthes candida also should occupy a front situation, but it should be remembered that, as it flowers in autumn, spreading plants should not be placed too near it.

CHRYSAN'THEMUM IN'DICUM.

INDIAN CHRYSANTHEMUM.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration	Introduced
China.	2 feet.	October.	Perennial.	in 1835?

No. 656.

Chrysanthemum is derived from the Greek language, literally meaning golden flower. See 353.

The present variety of Chrysanthemum has been lately introduced to our gardens, but we are unacquainted with the precise period of its introduction, or the medium through which it was obtained. It is, perhaps, the lowest in stature of any in cultivation, and therefore has been called Chrysanthemum pumilum in the nurseries; and is thought by some persons, to possess a specific destinction from any other. As far as the species Sinense and Indicum are distinct, and such distinction is now generally recognised, our present plant must be considered a variety of Indicum. It is very probable that both plants will ultimately be transferred to the genus Pyrethrum.

This plant, although its flowers are not of brilliant colour, is a most desirable addition to our autumnal gaieties. It is a profuse flowerer, and hardy; and it succeds well under the treatment usually bestowed on Chinese Chrysanthemums, either in pots or otherwise. If planted against a wall it will flower most abundantly.

Rudbeckia columnaris. ⅓

Andromeda tetragona.

Dracocephalum pelegrinum. ½

Vesicaria grandiflora. ½

RUDBECK'IA COLUMNA'RIS.

var. pulcherrima.

PAINTED-RAYED RUDBECKIA.

Class.
SYNGENESIA.

Order.
FRUSTRANEA.

Natural Order.
COMPOSITÆ.

Native of	Height.	Flowers in	Duration	Introduced
Texas.	2½ feet.	August.	Perennial.	in 1835.

No. 657.

Under No. 336, we published the usual plain yellow variety of Rudbeckia columnaris, which was introduced to Great Britain from North America, in 1811. The present beautiful and improved colouring of this flower is too attractive to admit of neglect. The plants possessing it were raised from seeds, under the direction of Mr. John Miller, in the Durdham Down nursery, near Bristol, and were amongst the novelties exhibited there by him, to many of the members of the British Association, in 1836. He had received the seeds from Mr. Drummond, who discovered the plant in Texas. They were amongst the last, we believe, which were sent to this country by that indefatigable collector, he having died soon afterwards in Cuba, where he had proceeded in search of other rarities of the vegetable and animal kingdoms.

Professor Don has instituted a new genus, named Ratibida, for this plant, on account of its differing in a trifling degree in its achinea and pappus from others of the genus Rudbeckia.

It may be grown with success in sandy peat; and admits of division at the root.

ANDRO'MEDA TETRAGO'NA.

FOUR-ANGLED ANDROMEDA.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
ERICACEÆ.

Native of	Height	Flowers in	Habit.	Introduced
Lapland.	6 inches.	April.	Shrub.	in 1810.

No. 658.

This genus has been named after Andromeda, the fabled daughter of Cepheus and Cassiope, who was rescued from the sea monster by Perseus, see No. 240. The genus Andromeda, like Rudbeckia, has been divided into several genera by Professor D. Don, and the plant now under consideration is his Cassiope tetragona.

The mere mention of Andromeda reminds us of Linneus's discovery of this very plant in Lapland —that country of rugged features, made up of frightful rocks and stupendous mountains, cataracts, rivulets, and little valleys, upon which the sun sheds its beams for three months without an hour's intermission, and then, as if exhausted of his effulgence, is seen no more for the same length of time, leaving the poor Laplander enveloped in snow and a murky twilight, relieved alone by his reindeer sledge, and the aurora borealis. Linneus, in his Flora Lapponica, says "Whilst I was walking quickly along, in a profuse perspiration, facing the cold wind, at midnight; if I may call it night when the sun was shining without setting at all; casting my eager eyes around me in all directions, I perceived as it were the shadow

of this plant, but did not stop to examine it, taking it for the Empetrum. But after going a few steps further, an idea of its being something I was unacquainted with came across my mind, and I turned back; when I should again have taken it for the Empetrum, had not its greater height caused me to consider it with more attention. I know not what it is that so deceives the sight in our Alps during the night, as to render objects far less distinct than in the middle of the day, though the sun shines equally bright. The sun being near the horizon, spreads its rays in such a horizontal direction, that a hat can scarcely protect our eyes: besides, the shadows of plants are so infinitely extended, and so confounded with each other, from the tremulous agitation caused by the blustering wind, that objects very different in themselves are scarcely to be distinguished from each other.

It is a remarkably neat little shrub, which might be mistaken at first sight for a heath. Although small it is comparatively robust when seen with another species of Andromeda—the hypnoides, a plant which covers wide tracts of the northern regions like moss.

Andromeda tetragona requires to be planted in good sandy peat, and succeeds best in a shady situation, covered with a hand-glass; or it may be kept at all times in a shaded part of the cold frame. Although under a Lapland atmosphere, it can bear the extremes of temperature, it cannot do the same with us. Cuttings of the young shoots strike readily in sand, under a bell-glass. Shade and a little bottom heat will aid their growth.

Don's Syst. Bot. v. 3, 829.

DRACOCEPH'ALUM PEREGRI'NUM.

FOREIGN DRAGON'S-HEAD.

Class.
DIDYNAMIA.

Order.
GYMNOSPERMIA.

Natural Order.
LABIATÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Siberia.	1 foot.	September.	Perennial.	in 1759.

No. 659.

The word, Dracocephalum, from the Greek, literally means DRAGON'S-HEAD. We have noticed this name and its derivation at length under No. 57.

There is no species of Dracocephalum that can be considered otherwise than very ornamental in the garden, and nearly all are quite hardy. The beautiful blue-flowering species, Altaiense, is sufficiently so, but this it is impossible to preserve in the open borders on account of the delight which slugs appear to have in banqueting on it. Three pink flowering species are met with in the nurseries, bearing considerable resemblance to each other, which for the little care they require should have a place in every garden. They are the Virginianum speciosum, and denticulatum. Another plant, a greenhouse species, is worthy of notice, as a close allie of those already mentioned—the Dracocephalum Canariense, or Balm of Gilead. This is so easily managed in a dwelling-house that all may have it, who possess sufficient taste to desire it.

The present species, peregrinum, may be divided at the roots when increase is required; it ripens seeds, from which it may also be easily propagated.

Don's Syst. Bot. v. 2, 813.

VESICA'RIA GRANDIFLO'RA.

LARGE-FLOWERED VESICARIA.

Class.
TETRADYNAMIA.

Order.
SILICULOSA.

Natural Order.
CRUCIACEÆ

Native of	Height.	Flowers in	Duration.	Introduced
Texas.	1½ feet.	September.	Annual.	in 1835.

No. 660.

The name, Vesicaria, is deduced from the word VESICA, a blister, or bladder. It was originally adopted in allusion to its bladder-like pods.

Amongst the tetradynamous class of annual plants, notwithstanding they are numerous, and many exotic species have been introduced to this country at different times, there are very few which are really deserving of cultivation in the flower garden; the Vesicaria grandiflora may, however, be quoted as an exception, the size and profusion of its flowers rendering it remarkably showy; they have the recommendation too of being long-lived, and appearing in succession for two or three months.

Seeds of this plant were collected by Drummond, in Texas, and sent by him to this country in 1835. It does not appear to ripen a quantity of seed at all proportionate to its produce of flowers. This circumstance may occasion it to continue somewhat rare in our gardens, and consequently the more an object of desire.

It should be sown in March, and forwarded with a little artificial heat. The young plants may be transferred to the open ground in May.

Rosa lutea. ½

Melissa nepeta.

Viola palmaensis. ½

Vaccinium vitis idea.

RO'SA LU'TEA.

Var. plena.

WILLIAMS'S DOUBLE YELLOW BRIAR.

Class.
ICOSANDRIA.

Order.
POLYGYNIA.

Natural Order.
ROSACEÆ.

Origin.	Height.	Flowers in	Duration.	Raised
Hybrid.	4 feet.	June.	Perennial.	in 1826?

No. 661.

The Rose, so much prized by every nation on earth, has a name in every language less dissimilar from each other than, perhaps, any other flower. The Celtic, Greek, and Latin RHOS, RHODON, ROSA, form the base on which the name in many modern languages has risen. They all have a manifest reference to a red colour. Our very word RED is also from the same root.

The beautiful double yellow Rose, which we now have the pleasure to introduce to our readers, was raised from seed of the single yellow Austrian Rose, about the year 1826, by J. Williams, Esq. of Pitmaston, near Worcester. It flowers much more freely than the old variety, and is a most valuable addition to our gardens.

The Austrian Rose, although single, does not produce seed unless its flowers be fertilized by the pollen of some other species. This, it is highly desirable, every person possessing it should attend to, and endeavour to raise seedling plants, by which means many varieties of the yellow Rose may ultimately be obtained.

This Rose requires no peculiarity of culture.

Don's Syst. Bot. 2, v. 577.

MELIS'SA NE'PETA.

FIELD BALM.

Class.
DIDYNAMIA.

Order.
GYMNOSPERMIA.

Natural Order.
LABIATÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Mt. Athos.	1 foot.	July, Oct.	Perennial.	in 1825?

No. 662.

The Greek word MELISSA, a bee, has been applied as the name for a plant, on account of its flowers yielding much honey. The word is a derivative from MELI, honey. Nepeta is a town of Florence. This plant with others of its allies has undergone transfers from genus to genus, being at one time considered a Thymus, at another Calamintha, at others, Melissa; it may, however, now be hoped that by the scientific research of Mr. Bentham, in his work on the Labiatæ, the genera of this order are settled, at least for many years to come.

This variety of Melissa Nepeta is known in the gardens as Melissa Atheos. It has a neat and rather bushy growth, and produces an abundance of its delicate flowers. Its dwarf habit makes it a suitable ornament for rock-work.

It proves to be perfectly hardy with us, and will grow in any common garden soil. It may be increased by division of its roots, in spring or autumn; or, as the plant ripens seeds in our gardens, it may be propagated from them with facility, and with some advantage as respects the handsomeness of the plants.

Don's Syst. Bot. v. 4, 781.

VI'OLA PALMAEN'SIS.

TREE VIOLET.

Class
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
VIOLACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S. Europe.	1¼ feet.	May.	Perennial.	in 1836?

No. 663.

The Latin word Viola was founded on the Greek ION, the name applied by the Greeks to a Violet, probably our Viola odorata. Etymologists have tried to discover why the term was first adopted as a name for the plant, but the ancient Eastern poets have so wrapped their connexion in fable as to defy a discovery of the truth.

The classical reader can easily refer to such fables, we, however, give the following as a specimen, reported in the words of Gerard, "The Grecians did call it ION, because certaine nymphs of Ionia gave that floure to Iupiter. Others say it was called ION, because when Iupiter had turned the young damosell Io, whom he tenderly loued, into a cow, the earth brought forth this floure for her food."

The Violet, it would seem, has been as much esteemed in the East as with us; indeed the inhabitants of Persia and Turkey are said to make use of it in their sherbet, in preference to fruit or other flowers. John Baptist Tavernier, in his travels, states that the sherbet drunk by the Grand Signor himself is made of violets and sugar.

This odorous flower may vie with the Rose itself

for the attentions paid it by modern as well as ancient poets. Perhaps no allusion to it by any writer of any age, ever equalled, for delicacy of feeling, that of our own immortal bard in the opening scene of his Twelfth Night. He there represents the Duke enraptured with a sweet strain of music, saying

> "That strain again—it had a dying fall:
> O, it came o'er my ear like the sweet south,
> That breathes upon a bank of violets,
> Stealing and giving odour." SHAKSPEARE.

The shrubby Violet now figured, does not agree with any description to which we have access. Although it displays not those rich and velvety tints, those brilliant lacings of golden yellow, and deepest hues of Tyrian dye which glow in the banners of the now-favoured Pansy, it may claim attention for superior strength and permanency, for its stems are shrubby, of upright growth, and branched, rendering the appellation "Tree Violet" less anomalous than would at first appear.

It is possible that varieties may be raised between the two species with some advantage to the florist; for notwithstanding the present large size of our garden Pansies, and the beauty which they display, their parent, the Viola tricolor of our fields, when compared with our present subject, is a very insignificant flower. Superior stamina may, by such mixture, be given to the offspring, without much hazard of degeneracy in its flowers. These are speculations which we leave for the consideration of the curious florist, worthy though they be of the scrutinizing study of the profoundest philosopher. Considered a frame plant, but probably quite hardy.

VACCIN'IUM VI'TIS ID'ÆA.

Var. majus.

COWBERRY.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
ERICACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
N. America.	9 inches.	Mar. June.	Shrub.	Unknown.

No. 664.

The origin of the word Vaccinium has been a question of uncertainty amongst critics, but is generally believed to be but a changed spelling of baccinium, which may have been applied to a plant from its bearing baccæ, berries. Vitis idæa rubra is a name which was used for this plant by old botanists.

The small variety of this plant is the red Wortleberry of Scotland, Wales, and the North of England; found on stony turfy heaths and in mountainous woods. It is a little close-growing evergreen shrub, not unlike dwarf box; and when ornamented with its delicate pale pink flowers is very ornamental in the front of larger shrubs, or even amongst herbaceous plants.

This plant will live and flower in almost every sort of soil; but to have it in perfection it must be planted in a good sandy peat, in a shady situation. Here it will spread by runners and produce fruit abundantly. The fruit of the common variety is gathered in many parts of Britain, and although rather austere and bitter, makes, after being preserved, a very palatable tart.

Don's Syst. Bot. v. 3, 855.

Verbena incisa. ⅔

Nemophila aurita. ⅔

Orchis ustulata.

Genista triquetra.

VERBE'NA INCI'SA.

CUT-LEAVED VERBENA.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
VERBENACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S. America.	3 feet.	June to Oct.	Perennial.	in 1836

No. 665.

The derivation of the name, Verbena, has already been noticed under No. 277.

The newly-introduced species of Verbena are subjects not only of attention in our gardens, but of great beauty, and even of splendor. Seeds of the present new and attractive species were collected at Santa Fee, by Mr. Tweedie, and transmitted to G. F. Dickson, Esq., of Everton, near Liverpool, and we believe to other individuals, by whom plants were raised in 1836. In the quantity and gaiety of its flowers, and luxuriance of growth, the Verbena incisa is with us, superior to all others. A single plant, put out late in the season, at the foot of a southern wall, soon grew to the height of nearly five feet, and continued long in beauty, with a constant display of upwards of a hundred heads of flowers at a time. The changeable tint of its flowers from very deep to pale pink adds to the brilliancy of their effect.

Cuttings of this plant make root so very readily that it may be increased to any extent. Seeds are sparingly produced. It requires frame or house protection during winter.

NEMO'PHILA AURI'TA.

EAR-LEAVED NEMOPHILA.

Class
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
HYDROPHYLLACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
California.	1 foot.	June to Aug.	Annual.	in 1831.

No. 666.

The meaning of the generic name, Nemophila, is explained under No. 586,

Seeds of this Californian annual were sent to the London Horticultural Society in 1831, by their collector, the late David Douglas. It has not yet come into general cultivation; indeed, it is more a stranger in our gardens than could be expected, considering that it produces seed pretty freely, and is quite hardy.

In the present instance the name of the plant, happens, with more correctness than is usual, to indicate one leading feature of its habit; for, as far as experience has yet explained its requirements, shade would seem particularly advantageous to the successful growth of the Nemophila, and conformably with such habit, its name points at its love of groves. The poetic feeling thus conveyed in the word Nemophila raises wood-nymphs and sylvan fairies to the imagination, as fond nurses of floral beauties, forcibly reminding us of Darwin's poetic allusion to the vegetation of seeds under the fostering care of Sylphs and Zephyrs, which he so characteristically expresses, in his own peculiar style.—

Come ye soft Sylphs! who sport on Latian land;
Come! sweet lip'd Zephyr, and Favonius bland!
Teach the fine seed, replete with life, to shoot
On Earth's cold bosom its descending root;
With pith elastic stretch its rising stem,
Part the twin lobes, and fan the aspiring gem.

The Natural Order to which Nemophila belongs is, as Dr. Lindley says, interesting to the scientific botanist from several peculiarities in its structure. One of these is the singular manner in which the seeds are fixed to the pericarpium. 'In the beginning the ovarium has but one cell, from the bottom of the cavity of which, and from opposite sides, there spring two little plates attached by a small stalk, and bearing two conical, rather distended, obtuse bodies upon their inner face; at this time the plates are formed of very minute and laxly cohering vesicles of cellular tissue. By degrees these plates enlarge, and become succulent and form two fungous placentæ, filling up the whole cavity of the ovarium, while the bodies that they bear, changing to ovula, are jammed in between the two opposing faces of the placentæ. At a later period, when the flower has withered, the placentæ so completely fill the cavity and conceal the ovula, that they may easily be mistaken for half-grown seeds. After this time they generally diminish, till they become, when the seeds are ripe, a mere membrane, which lines the cavity of the capsule. The ovula themselves, if squeezed in water, emit a cloudy matter, which, when examined microscopically, is found to consist of minute moving particles, mixed with drops of an oily fluid.'*

* Bot. Reg. 1601.

OR'CHIS USTULA'TA.

DARK-WINGED ORCHIS.

Class.
GYNANDRIA.

Order.
MONANDRIA.

Natural Order.
ORCHIDACEÆ.

Native of	Height	Flowers in	Duration.	Inhabits
England.	4 inches.	June.	Perennial.	Chalky pl.

No. 667.

Orchis, a Greek name which has an allusion to the tuberous roots.

It would seem in some degree unnecessary to mention the attractions possessed by any of the Orchidaceous order of plants. Our British hardy species are always admired; and the numerous exotic species are amongst the most wonderful productions of nature. It is the cultivation of them which demands notice, from the difficulty which is generally experienced in their management. A bed of hardy Orchises, growing luxuriantly in a garden, is indeed a rarity; still, this need not be the case. It should be remembered that our present species, and many of its congeners, are natives of chalky districts only; and they rarely or never succeed but on a natural or artificial substratum of chalk or lime-stone. They should be planted in a mixture of loam and chalk, removing them when in blossom: and in regard to aspect, an eastern, or varying from that to a northern, has always been observed to be most congenial to their growth. A due regard to these leading features of cultivation will remove the principal difficulties.

Hort. Kew. 2, 5, 189.

GENIS'TA TRI'QUETRA.

TRIANGULAR GENISTA.

Class.
MONADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Habit.	Introduced
Corsica.	2 feet.	June.	Shrub.	in 1770.

No. 668.

Genista, see No. 594. The specific name, triquetra, alludes to the triangular stem which occurs in this species.

During a month or more of the early part of the summer it is a remarkably gay shrub; at which time it flowers most profusely, and may be easily so disposed as to enblazon the surface of a wall or terrace almost as with gold. It is not requisite that it should have the advantage of such situations otherwise than to assist its trailing habit, which unless so aided will not admit of its rising so high as may be desirable in some situations, to show it to advantage.

Where it is required to spread low over the surface of mounds, or on artificial rock-work, this shrub may be so trained as to produce a complete covering; an object which it is not unfrequently desirable to attain, on irregular rocky borders.

We have not seen this shrub ripen seeds, still it is probable that if grown under very favourable circumstances it would do so. It may be readily and abundantly propagated by layers; and will grow in any common soil.

Don's Syst. Bot. v. 2, 149.

Iris Chinensis. ⅓

Ænothera dentata.

Epilobium latifolium. ⅓

Aster cassia rubicus. ⅓

I'RIS CHINEN'SIS.

CHINESE IRIS.

Class
TRIANDRIA.

Order.
MONOGYNIA.

Natural Order.
IRIDEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
China.	2 feet.	May, June.	Perennial.	in 1792.

No. 669.

Iris, the Greek name of the rain-bow. It was a happy thought of the old botanists to connect the rain-bow—its colouring, and its evanescence—with flowers; and the more so, since the summer shower and sunny ray are equally the parents of both.

The Iris Chinensis is usually cultivated in the green-house, and very frequently with equal success, as a window plant; it is however, sufficiently hardy to bear a mild winter when exposed in the borders. We have met with a singular practice in its cultivation, which is considered indispensible to its luxuriant growth by the persons who adopt it; this is, watering it regularly with boiling water; the water being poured into the pan in which the pot with the plant is placed. Whether water be better adapted after boiling, to the requirements of this plant we are not prepared to state, but it is certain that with it this Iris often flowers splendidly. Although this plant may be cultivated as a half-hardy or frame plant, it does not flower so finely as when kept in the window of a sitting room. It should have a rich soil, and may be divided at any season of the year.

 Hort. Kew. 2, 1, 123.

ŒNOTHE'RA DENTA'TA.

TOOTHED ŒNOTHERA.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
ONAGRARIÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Chili.	½ foot.	June to Aug.	Annual.	in 1832.

No. 670.

For the meaning and origin of the generic name see No 201.

Although the flowers of this rather scarce species of annual Œnothera are small, their abundance makes the plant altogether showy, and its effect is further heightened by the lively tint of its stems. It grows compactly together in patches, where sown, and never rises but a few inches above the surface of the ground, hence from its habit as well as its beauty, it is well suited for the front of the parterre, or for ornamenting rock-work. This beautiful little plant is so distinct in habit from the numerous ornamental Œnotheras at present in common cultivation, and from annuals generally, that it should not be wanting in any respectable collection.

As the Œnothera dentata comes into flower early, in regard to the time it is sown, it would be unnecessary to make the general sowing before the middle of April. This may be done in the borders, if slugs can be securely guarded against, otherwise it will be better to sow it in pots and transplant the seedlings when half an inch high. If sown in May it would blossom late in autumn.

Don's Syst. Bot. v. 2, 684.

EPILO'BIUM LATIFO'LIUM.

BROAD-LEAVED WILLOW-HERB.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
ONAGRARIÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Europe.	2 feet.	JulyAugust.	Perennial.	in 1779.

No. 671.

The name, Epilobium, is deduced from the Greek language, signifying, literally, a Violet upon a pod. It was not uncommon for the Greeks to use the name of the Voilet to indicate beauty, hence it is used in the present instance without reference to any real resemblance between the flowers.

The Epilobium latifolium is a very ornamental plant, suitable for the borders or rock-work, and would, perhaps, be as generally cultivated as the Pink or Polyanthus were it at all times as easily subjected to division; this, however is not the case, for oftentimes it is not only not visible on the surface of the ground, but it is not readily found beneath it, for a single under-ground shoot will travel, in a light soil, two or three feet in a season, scarcely leaving a fibre to mark the place of its former residence.

If the creeping suckers of this species of Epilobium be transplanted in autumn or spring they will grow; and it will be found advantageous to plant it in a strong soil, which by checking its roving habit will concentrate its growth, and thereby increase its gaiety.

Don's Syst. Bot. v. 2, 680.

AS'TER CAS'SIARABICUS.

CASSIARABIAN ASTER.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of	Height	Flowers in	Duration.	Introduced
Iberia.	2 feet.	September.	Perennial.	in 1834.

No. 672.

The derivation of the name has been previously noticed.

Under No. 188 we published the Aster Amellus, than which very few species are more desirable, and none possessing the same classic interest. The present species is closely allied to it, but is of superior growth and beauty, has greater depth of colour, and is even a more abundant flowerer than Amellus. Mr. Cameron informs us that it was raised in the Birmingham Horticultural Society's Garden, in 1834, from seeds, received from Russia. It may probably be the Aster Ibericus of Stevens, which Decandolle considered a variety of Amellus. This, at the present moment, we have not the means of determining.

The Aster belongs to one of the most extensive vegetable families in nature. It is one of the Syngenesious Class of Linneus, and Natural Order Compositæ, (compound flowers) of more modern writers. In its latter character it is highly interesting, and that we may call the attention of our younger readers to compound flowers we will quote Rossieu's pleasing description of the flower of the

Daisy, which is very similar to that of Aster. He says, "Take one of those little flowers which cover all the pastures, and which every body knows by the name of Daisy. Look at it well; for by its appearance, I am sure you will be surprised when I tell you that this flower, which is so small and delicate, is really composed of between two and three hundred other flowers, all of them perfect; that is, having each its corolla, germ, pistil, stamens, and seed; in a word, as perfect in its species as a flower of the hyacinth or lily. Every one of those leaves which are white above and red underneath, and form a kind of crown round the flower, appearing to be nothing more than little petals, are in reality so many true flowers; and every one of those tiny yellow things also which you see in the centre, and which at first you have perhaps taken for nothing but stamens, are real flowers. Pull out one of the white leaves from the flower; you will think at first that it is flat from one end to the other; but look carefully to the end by which it was fastened to the flower, and you will see that it is not flat, but round and hollow, in form of a tube, and that a little thread, ending in two horns, issues from the tube; this thread is the forked style of the flower, which, as you now see, is flat only at the top. Commonly the yellow florets towards the centre are still rounded and closed. These, however, are flowers like the others, but not yet open; for they expand successively from the edge inwards. This is enough to shew you by the eye the possibility that all these small affairs, both white and yellow, may be so many distinct flowers; and this is a constant fact."

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BSB Bayerische StaatsBibliothek
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Maund, Benjamin,

The botanic garden Consisting of highly finished representations of hardy ornamental flowering plants, cultivated in Great Britain ; with their names, classes, orders, history, qualities, culture and physiological observations
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